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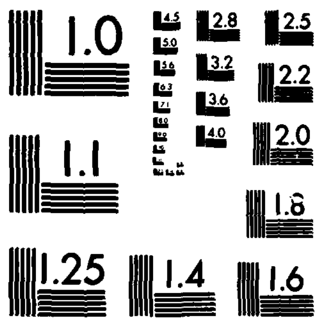

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DCSLOG
DEPARTMENT OF THE ARMY

PHASE II STUDY REPORT

ANALYSIS OF OFF-LINE LOGISTICS SYSTEMS

AD-A150 763

" The views, opinions, and findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision, unless so designated by other official documentation".

VOLUME II

CONTRACT NO. MDA-903-84-C-0202

SEPTEMBER 24, 1984

ARTHUR YOUNG

A MEMBER OF ARTHUR YOUNG INTERNATIONAL

ARTHUR YOUNG

1025 Connecticut Avenue, N.W.
Washington, D.C. 20036

September 24, 1984

Lieutenant General Benjamin F. Register, Jr.
Deputy Chief of Staff for Logistics
Department of the Army
Washington, DC 20310

Dear General Register:

Arthur Young & Company ~~is pleased to~~ submits this ~~report~~ on ~~our~~ review of the U. S. Army Information Systems Command (USAISC) supply system.

The study addressed the dedicated retail supply support system for communications-electronic (C-E) systems and equipment organic to and operated by USAISC. In the process we developed a description of the ISC supply system and its operating environment; examined the rational behind its establishment; compared it with the standard system; and evaluated its procedures. Analysis was extended from the user level through the direct support level to the interface with the wholesale level.

During the study we defined the unique characteristics of the ISC system -- use of high technology equipment, dependence on nondevelopment items (NDI) to meet needs, very high operational readiness requirements, low density and often remote locations which has led to a large percentage of non-demand supported parts stockage and substantial use of local purchase. This environment has necessitated intensive management. We determined that this need for special management still exists and, in our opinion, will continue to be needed as long as high technology and state-of-the-art requirements drive NDI acquisition.

In addition to recommending that the intensively managed USAISC supply system be retained, we made a number of additional observations, conclusions and recommendations relating to the supply system to include comments on such issues as materiel acquisition, the authorization process, asset visibility, and cataloging procedures.

ARTHUR YOUNG

We believe the implementation of our recommendations will improve the supply system from the standpoint of both the Department of the Army and the Information Systems Command and will result in enhanced capability to manage the Army's assets.

If you have questions about this report or need additional information, please contact either me or E. J. Delaune, Director of Defense Management Services, at (202) 828-7000.

Very truly yours,

ARTHUR YOUNG & COMPANY

By: Henry J. Steininger

Henry J. Steininger

CONTRACT INFORMATION SHEET

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Title: OFF LINE LOGISTICS SYSTEMS

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VOLUME I Executive Summary
VOLUME II Phase II Study Report
VOLUME III Appendices

OFF LINE LOGISTICS SYSTEMS

VOLUME II

PHASE II STUDY REPORT

TABLE OF CONTENTS

SECTION III ISC SUPPLY SYSTEM

SECTION IV ISSUES AND OBSERVATIONS

APPENDICES

SECTION I GENERAL

A. BACKGROUND

1. This study report responds to Phase II of Contract No. MDA-903-84-C-0202.

2. Contract MDA-903-84-C-0202 was awarded to Arthur Young and Company to make a study of off-line or stovepipe supply systems for the DCSLOG, Department of the Army. Appendix A is the statement of work as contained in the contract. Phase I (14-29 May 1984) was a preliminary review of off-line or stovepipe supply systems managed by the Army. At the conclusion of Phase I, DCSLOG directed a Phase II study of the US Army Information Systems Command (ISC) unique retail supply system. During Phase I, ISC was still designated the Army Communications Command (ACC) and the Phase II study was scoped to exclude computers as well as COMSEC equipment. Its primary focus was to be ISC peculiar communications-electronic C-E equipment, or that for which USAISC was the sole owner and user.

3. Phase II started on 14 May 1984 and was completed on 24 September 1984.

B. SCOPE OF PHASE II

The study addressed the dedicated retail supply support system for C-E systems and equipment (Class VII and IX) organic to and operated by USAISC. Analysis was extended from the user level (PLL) through the direct support or ASL level to the interface with the wholesale level. Similarities and differences from the standard system were observed and assessed. Noted were features of the ISC unique system which were beneficial and had merit, and, at the same time, those objectives of the standard system which were not being met. Conclusions and recommendations were based on these observations and assessments.

C. METHODOLOGY AND ACTIONS

1. Project Organization. See Appendix B.

2. General Approach.

a. In carrying out the analysis of the ISC unique supply system the study team developed a description of the ISC system and its operating environment. The team then examined the rationale behind its establishment with paricular attention to readiness requirements and mission performance. Comparison with standard procedures were evaluated in terms of performance, relative economy and wartime operability.

b. Although use of standard supply systems is prescribed Army policy, the ISC has a unique retail supply system authorized in the past to provide the special management needed to meet operational readiness criteria. The question to be pursued is whether or not the ISC unique system is still required in its present form or if it can be incorporated in part or in whole into the standard system.

c. Recommendations reflect those things which in the judgement of the study group need to be done to improve supply operations in ISC or across the face of the Army, the main criterion being what is best for the Army.

3. Actions. Specific actions taken by the study group include:

a. Literature search and collection of source material, including statistical data on the ISC supply system. Statistical information included OST, performance factors and operational readiness criteria.

b. Selected briefings and interviews with key personnel. A list of individuals contacted is at Appendix D.

c. Visits to Ft. Ritchie, Ft. Huachuca (ISC headquarters), Ft. Monmouth, Ft. Gordon and selected ISC PLL sites. Copies of trip reports are attached as Appendix C.

d. In-process review conducted for the DCSLOG on 31 July 1984.

e. Assessment and preparation of the study report.

f. Detailed briefing presented to the DCSLOG on 10 September 1984.

g. Final Report draft on 24 September 1984.

SECTION II THE STANDARD SUPPLY SYSTEM

A. BACKGROUND

1. The main objective of the study was to assess the ISC supply system in comparison with the standard supply system. The objective of the comparison basically was to determine:

a. If there were unnecessary duplication of resources (meaning people, money, and things).

b. If the ISC supply system could function and deliver as efficiently as the standard system.

c. If the ISC system could transition to war.

2. A review of existing literature (Army Regulations, school texts etc.) gives detailed description of portions of the "Army Supply System" (e.g. AR 710-1 "Centralized Inventory Management Of The Army Supply System", and AR 710-2 "Supply Policy Below The Wholesale Level".) The point being that it is very difficult to find a concise, explicit definition of the Army Supply System. When we include the word "Standard" there is more difficulty in finding a definition. For example, the USAWC Text Army Command And Management, Theory and Practice 1983-84 provides the following "The overall concept for Standard Army Logistics System (SALS) embodies standard systems in every functional area." This virtually defies precise translation into a definition of a standard system.

a. It is very difficult therefore to compare an "off line" or a "stovepipe"system to a standard system until there is a working definition of the "standard system". That is not to say that the existing logistic systems are not sanctioned, nor are they unworkable. What they really are would be more properly called approved logistics systems i.e., logistics systems approved by the DCSLOG or per Army regulation to accomplish specified functions and operations.

b. Accordingly, we defined a concept of an Army standard supply system so that we might compare the Information System Command supply system with it.

B. THE ARMY STANDARD SUPPLY SYSTEM

1. General

a. The Army standard supply system has many components and subsystems and can be viewed from different perspectives, with each perspective showing a different "slice" of the system. One perspective involves materiel management: the people and organizational framework that constitutes the infrastructure for "managing" materiel, and can be visualized as the chain that starts with the PLL clerk and goes all the way to the Item Manager at the National Inventory Control Point (NICP) and back down again. A second perspective is in terms of information processing: the paper-work flow and/or automated systems by which the information is processed; examples are the Standard Army Intermediate Level System

(SAILS-AB) at the CONUS installation and Corps Support Command level in the oversea areas and SAILS-ABX at the oversea theatre level; the Division Logistics System; the Commodity Command Standard System (CCSS) used in the Army Materiel Command (AMC) for inventory management functions. A third perspective concerns distribution: the system by which materiel flows from a source of supply to a customer/user. The standard distribution system is the Direct Support System (DSS). A fourth perspective can be viewed in terms of materiel acquisition: the procurement work directive at the NICP or the local purchase order at the installation level to obtain supplies or materiel for depot stockage or local issue.

b. Because of the complexities and many subsystems of the standard supply system, a functional understanding can be demonstrated quite well by means of a discussion of the standard supply distribution system since it functionally embraces all subsystems, and cuts across the entire fabric of the standard system. For example, the USAREUR standard supply system is depicted as Exhibit II-1 in Appendix E.

2. Definition

The Direct Support System (DSS) is the Army standard supply distribution system for class II (individual clothing and equipment), class IIIJ (packaged petroleum), class IV (construction materiel), class V (missle components), class VII (major end items), and class IX (repair parts). An air line of communication (ALOC) exists for the rapid distribution of selected items under DSS by airlift, significantly reducing the order ship time (OST). ALOC was established for class IX and maintenance related class II items, and has been expanded to include class VIII (medical materiel including specialized medical repair parts) to Korea and more recently to Europe (as a test), and certain electronic materiel support for USA INSCOM field stations in Berlin and Turkey.

3. Description

a. In DSS, the customer/user submits a request using a standard form to an operating Supply Support Activity (SSA). An SSA is generally the Installation Supply Division in CONUS, and is generally a Direct Support Unit (DSU) or General Support Unit (GSU) in the oversea areas. The SSA converts the request to a requisition capable of electronic transmission to the NICP. The NICP directs a CONUS wholesale depot to ship the requested materiel directly to the SSA, which issues it to the customer/user.

b. Because DSS involves the direct delivery of shipments, both in CONUS and overseas, it reduces the need for intermediate levels of stock. The primary objectives include improved supply responsiveness through reduced OST, reduction of inventories at the intermediate levels resulting in reduced costs, and improved visibility of both requisitions and intransit materiel. The system takes advantage of high speed communications capability for requisitioning and reporting, and more responsive means of transporting cargo.

c. In the oversea areas, the system is characterized by maximum delivery of shipments direct from CONUS depots to DSU's and GSU's. Designated CONUS depots process and ship full container and air pallet loads directly to the requisitioning DSU or GSU. Designated containerization/consolidation points are used for less than full container or pallet loads for optimum efficiency and cost effectiveness.

d. One of the advantages of DSS is that the documentation is designed to enhance accountability and to take advantage of automated techniques wherever possible. It reduces manual intervention to the minimum.

4. Asset Visibility

Visibility over both supply and transportation transactions is maintained by means of the Logistics Intelligence File (LIF) at the US Army Logistics Control Activity (LCA), which maintains a complete history file on every requisition. The file is opened with receipt of an image of the originating requisition, and is continuously updated with chronological information pertaining to supply, lift/intransit, follow-up, cancellation, and receipt status. Thus a DSS requisition is tracked from the date of submission to the CONUS supply source through the date of receipt of the materiel by the requisitioner. With this visibility, responsiveness can be measured and intransit control can be exercised. The LCA performs a number of of management functions which serve to improve supply support to the operating elements of the Army. An example is the LCA OST performance report which uses data contained in the LIF to measure actual OST against the DSS objectives or against the Uniform Materiel Movement and Issue Priority System (UMMIPS) standards.

5. The Defense Automatic Addressing System (DAAS)

The DAAS is the interface between the customer in the field and the source of supply at the wholesale level. It is a random access digital computer system linked to the automatic switching center of AUTODIN. It receives, processes, and automatically routes or passes logistcs transactions to the proper addressee and provides information image copies thereof to the LIF.

6. Standardization

The Army standard system uses or incorporates standard, common terms, language, codes, and formats essential to integrated automatic data processing and digital communication networks. These include the Military Standard Requisitioning and Issue Procedures (MILSTRIP), the Military Standard Transportation and Movement Procedures (MILSTAMP), and the UMMIPS.

C. DERIVED DEFINITION

1. Based on the above description of the standard Army supply system, we derived the following to assist us in our work as we reviewed both on line and off line systems.

a. A standard Army supply system exists where supply transactions are processed through a supply support activity (SSA) which may be an MMC for TOE units or a SAILS element at an installation.

b. Routing a request through an SSA should provide:

- An authorization edit.
- A demand history.
- A funding cite.
- An entry into AUTODIN.
- A conversion from a customer request to a requisition.
- The establishment of an automated audit trail.
- The establishment of asset visibility (through DAAS/LIF).

o The establishment of an interface or an interoperability capability with the other logistics and documentation systems.

2. The above statements are self explanatory. While they are fundamental to the supply system, these and other common functions would also be elemental to standard functional systems in the fields of maintenance, transportation, services and facilities. By applying these and other functional or conditional tests we believe that we have a measure of a true standard logistics system.

o Perhaps consideration should be given to changing the term used for the present standard logistics systems to General Purpose Logistic Systems, and other systems to Special Purpose Systems. This will be discussed later in the report.

D. SUMMARY

The tremendous technological explosion in ADP in the past score of years has seen a corresponding explosion in the way logisticians do their business. This growth has not been without its problems, however, including problems in the field of standard logistic systems. These problems include lexicon, definition and elaboration in Army Regulation, texts and doctrine. We believe that comparing the present standard system to the ISC unique system in later paragraphs of this paper will be informative in this regard.

SECTION III ISC SUPPLY SYSTEM

A. ISC ORGANIZATION AND MISSION.

1. The US Army Information Systems Command (ISC) has been reorganized and redesignated as a result of the Army's adoption of an information mission area that supports the total Army management and command and control requirements. This new information mission area, among other things, combines the US Army Communications Command (ACC) and the US Army Computer Systems Command (CSC) into the Information Systems Command which will evolve over a period of 16 months. This reorganization/ redesignation had not taken place when this study commenced. As indicated in Section I, this study was scoped to address the supply system which was established to support the missions and functions of the (old) ACC; i.e., ISC less computers, ADP and COMSEC.

2. The mission and functions of ISC are enumerated in AR 10-13, United States Army Communications Command, 15 September 1980. The principal missions are:

a. Provide portions of the Defense Communications System(DCS). This includes operation of a part of the automatic digital network (AUTODIN), automatic voice network (AUTOVON), a part of the automatic secure voice network (AUTOSEVOCOM), satellite communications ground terminals, line of sight microwave radio facilities, and similar systems/functions.

b. Provide base communications in CONUS and overseas. This involves the commercial type telephone exchanges at the installation level.

c. Provide communications at echelons above the Corps (EAC).

d. Provide all Army Air Traffic Control (ATC) services and systems, mobile and fixed.

e. Conduct combat developments for DCS (Army), EAC level communications, base communications, and Army ATC systems.

f. Serve as developing agency for the overall design of communications systems which have sole application to DCS and other assigned communications systems.

g. Conduct training for ISC unique equipment and systems for which there is no established training base.

3. ISC has several special purpose commands which have a direct bearing on the ISC supply system.

a. Communications-Electronics Engineering Installation Agency (CEEIA). The agency provides the engineering test and evaluation, and installation of systems fielded to/by ISC; they also perform Army-wide telecommunications automation development and maintenance, and engineering services for worldwide radio propagations and Army-wide electromagnetic compatability. CEEIA also provides software development and maintenance for computers used in communications systems roles. The Commander of CEEIA is triple hatted, in that he is also the Commander of the Communications Systems Agency (CSA), and is the Project Manager, DCS (Army).

b. Communications Systems Agency (CSA). CSA is both a major subordinate command of ISC and a multisystem project management office of AMC. It has the full-line authority of both organizations. The agency is primarily responsible for nontactical telecommunications projects assigned to the Army for acquisition by the Defense Communication Agency (DCA). It performs all of the life cycle functions associated with materiel acquisition, to include research and development, and integrated logistics support, but the major workload of the agency is acquisition and fielding - everything from single pieces of equipment to global telecommunications systems. Most of CSA's acquisitions are off the shelf/non-development items (NDI).

4. ISC had, in 1983, 29,400 military and civilian workers at 1,436 locations in 13 countries. They operated the following systems and facilities:

a. Transmission

o 21 Satellite communications ground terminals

- o 161 Line of sight microwave radio facilities

- o 38 Troposcatter radio facilities

- o 197 High frequency radio facilities

b. Data Communications

- o 179 Telecommunication centers

- o 160 Remote telecommunication terminals

- o 5 AUTODIN switches

- o 45 Remote telecommunications terminals (for support of other than Active Army)

c. Voice communication

- o 542 Telephone exchanges

- o 4 AUTOVON switches

- o 39 AUTOSEVOCOM switches and switchboards

d. 126 Air Traffic Control Facilities

e. 7 COMSEC Logistics Support Facilities

f. 2 Area Maintenance and Supply Facilities (AMSF); 1 Centralized Supply Support Facility (CSSF)

5. ISC is organized as shown on the Organization chart at Exhibit III-1 at Appendix E.

B. THE ROLE OF DCA

a. A primary mission of ISC is to provide the Army's assigned part of the DCS. The DCA ensures that the DCS is planned, operated, and managed effectively and efficiently to meet the communications requirements of the National Command Authorities, the Office of the Joint Chiefs of Staff, and the commanders of unified and specified commands. Because the DCS must be continually and consistently capable of performing its mission in situations ranging from peacetime to nuclear war, DCS readiness is of paramount concern. Readiness of a communications system pertains to an overall system capability and alternative ways to maintain that capability so that the integrity of the network of interconnected sites remains intact. Accordingly, the DCA prescribes operational readiness (OR) rates to insure the availability of DCS equipment maintained and operated by the military departments. These availability rates are expressed in terms of a percentage and constitute a management threshold or performance objective for the ISC units, and in essence establish a level of performance below which intensive management action is required. DCA established availability requirements are structured around a concept known as link availability, with a 99 + % up-time. Actual management/operation of the various DCS systems translates into a very narrow window for downtime before it necessitates intensive management action. These DCA established availability rates become imperatives in the structure of the ISC retail logistics system, as well as in the architecture and network redundancy in the communications systems themselves. A responsive supply and maintenance system, then, requires an engineered stockage policy and a dedicated operating capability in order to accomplish the DCS-Army mission.

b. The DCA is the combat developer for the DCS, but they do not budget or provide funds for acquisitions or operations. They use the "lead military department" concept, and assign responsibility for the development or acquisition of a system to one of the military departments. Hence, the military departments are the materiel developers for the DCS. In this regard, the Commander of the Communications Systems Agency (CSA) is the PM, DCS-Army. The DCA need to exploit technology in the communications - electronics arena is pursued by CSA which uses an adaptive acquisition strategy to accelerate the acquisition cycle and fosters the pre-planned product improvement concept, both of which enable the procurement of NDI or off-the-shelf commercial equipment in order to field state of the art technology, which can be later modified, if need be, for a specific telecommunications system or purpose.

c. Examples of availability rates for ISC operated systems of the DCS, as prescribed by DCA, are:

SYSTEM		% AVAILABILITY
Radios (DCS)	>	97 - 99.5
Microwave (DCS)	>	99.5
Troposcatter (DCS)	>	99.5
Cable/landline (DCS)	>	99.0
Satellite terminals (DCS)	>	99.5
AUTODIN (DCS)	>	99.5
AUTOVON (DCS)	>	99.9
AUTOSEVOCOM (DCS)	>	99.5

C. INTERFACE WITH TRADOC AND AMC

ISC is both a combat developer and a materiel developer, and thus has a significant interface with both TRADOC and AMC.

1. Interface with TRADOC

a. The combat development relationship between TRADOC, which is the principal combat developer for the Army, and which is responsible for combat development integration within the Army, and ISC concerns the development of integrated doctrine for the employment and utilization of communication systems, and the training for new equipment as well as training on CE equipment for which there is no established DA training base. Specifically, in regards to communications doctrine, ISC has the responsibility for echelons above the Corps, and TRADOC has responsibility for the Corps and below. The coordinating responsibility for the interface has been placed on ISC. A Memorandum of Understanding (MOU) between the two commands ties together these responsibilities, but it is several years old and is in need of review, and revision, given the major redesignation of ISC and the establishment of the information mission area. Currently, the communication Mission Area Analysis is a joint product between TRADOC and ISC, resulting from the efforts of a joint work group.

b. ISC and TRADOC have an established coordination program on the Basis of Issue Plan and the Qualitative, Quantitative Personnel Requirements Information (QQPRI) documents. ISC has the responsibility to develop quantitative personnel requirements for the QQPRI process which the Signal School uses, during the coordination process, to determine training needs based on MOS and Additional Skill Identifiers (ASI) contained therein. Another aspect of the BOIP/QQPRI process coordination is the use of that process to establish training requirements for new ISC equipment and systems at the Signal School. Currently, the Signal School is using the Teler Process to obtain ISC equipment for instructional/training purposes and they are subsequently experiencing difficulty in establishing authorization for this equipment on their TDA. Formalizing the requirement process up front with the BOIP should assist in routinizing the authorization process. (Teler stands for Telecommunications Requirements Planning, Developing and Processing. Teler is a statement of the requirement. The Teler process is the planning, programing, budgeting and acquisition after approval of a telecommunications service, facility, or system for which ISC has responsibilty, such or AUTOVON, AUTODIN, Air Traffic Control, base communications, etc.)

c. An informal rule of thumb exists in the TRADOC/ISC interface concerning the division of responsibility between tactical and strategic systems and is expressed in terms of mobility. If the system is on wheels or tracks it belongs to TRADOC. If it is a fixed site it belongs to ISC. There are exceptions to this generalization but it may be a useful term of reference.

d. The training interface between TRADOC and ISC involves the ISC role as a materiel developer and the CSA PM responsibilities concerning total systems fielding which encompasses a determination on the life cycle maintenance requirements for new equipment. This determination centers around initial training (usually by Contractor) and sustaining training (usually by the Signal School) and must be precise as to time frames, skills, type and nature of training, etc. The Signal School and ISC participate in scheduled, regularly held Personnel and Training Conferences to bring together all of the interested players to coordinate training matters on a programed basis. The New Equipment Training Plan is the principal vehicle to address, on a check-list basis, what training is needed, who provides it, and the schedule and locations involved. ISC initiates the New Equipment Training Plan, which has significant TRADOC involvement. It is a process that tracks the coordination of the BOIP/QQPRI process, authorization, type classification, training publications, maintenance allocation and the many other essential data elements that are involved in the total systems fielding process. One of the most important features of this plan is that it fixes responsibility for initial, as well as follow-on/ sustaining training for the systems involved and thus prompts the determination for life cycle training needs. In all cases, this training coordination/interface is for equipment and systems used only by ISC.

2. Interface with AMC

a. The materiel interface with AMC concerns both CSA and the Satellite Communications Agency (SATCOMA), an operating agency of CECOM. CSA is ISC's major item acquisition agency and materiel developer, and its Commander is the PM for DCS-Army. CSA performs all materiel development functions associated with materiel acquisition, to include ILS, as well as employing an adaptive acquisition strategy to achieve a shortened procurement cycle for NDI and commercial equipment. In all cases, fielding is to ISC. The procurement function of CSA is performed by CECOM, and CSA is, in fact, a joint organization that belongs both to ISC and AMC. CSA acquisition requirements are for strategic (nontactical) telecommunications systems, and they normally are placed upon CSA by the DCA. NDI predominates in their acquisitions, and they can field in about 2 years as opposed to the 8-10 year normal development cycle. They either buy off-the-shelf equipment, or existing equipment which can be modified later as a pre-planned product improvement. The pre-planned product improvement (P3I) concept is referred to as the 70 percent solution in CSA circles; it permits rapid acquisition and fielding of systems with state-of-the art technology with planned follow-on improvements and avoids the costs and lead time associated with engineering, development, manual writing and publication, etc.

b. SATCOMA is the Army PM for satellite communications. The programs are tri-service. Tactical requirements are received from TRADOC and strategic requirements are received from DCA. The ISC interface with SATCOMA centers around the strategic systems, which are a part of the DCS, and are thus fielded to and operated by ISC. Satellite communications equipment used in the fixed site, strategic systems typifies the NDI arena - and exemplifies the acquisition process to acquire current technology, as opposed to the normal engineering development process which either fields obsolescence or results in long delays. The procurement of NDI, either commercial design off-the-shelf, or one that can be easily modified, is an optimum approach to capture current technology.

c. ISC has a normal customer relationship with CECOM, which is the Army's communications-electronics material management center. An interesting observation concerning CECOM, which is in line with the explosion in CE technology, is that CECOM projects a 48 percent increase in the number of items managed in the next 5 years.

D. TECHNOLOGY

1. Definition.

Technology is change, progress, opportunity, and break-through. If one traces the generation changes of the computer from the vacuum tube to solid state to printed circuit boards to semi-conductor chips, and considers mini and micro size reductions as well, one gains an appreciation for the meaning and effects of technology.

2. Impact on ISC.

Technology is providing an expanding array of electronic based devices featuring user-operated capabilities such as electronic mail, automated word processing, and interactive data handling with remote access features. The computer and electronic processor have enabled the manipulation of vast quanities of data into decision support systems in countless different disciplines and functional areas. In short, technology has propelled the Army into the Information Age. There has been an explosion of automation networking requirements. The Army is turning to communications and information as a force multiplier to replace scarce human resources. With the establishment of the information mission area, and the reorganization/re-designation of ISC, the new ISC will be in the forefront of managing the Army's information resources, which include information, doctrine, data, knowledge engineering, applications, communications, processing equipment, and the related personnel, services, facilities and organizations. The challenge of the immediate future will be to find the appropriate organizational and operating concepts to provide fully integrated information systems to the Army in garrison, and to a rapidly deployable, totally mobile high technology fighting force in the field.

3. Technology considerations.

a. Technology advancements and enhancements in electronics change so rapidly that acquiring state-of-the art capability mandates an accelerated acquisition cycle. The consequences are either to field an obsolescent system, or a delay in meeting a current requirement. Because technology changes outstrip the developmental model lead time, the communications managers for the Army- ISC, SATCOMA, CSA have turned increasingly to the acquisition of non-development items (NDI), commercial, off-the-shelf items which can be fielded immediately, or modified to meet a specific telecommunications system or purpose. NDI systems tend to be low density, that is, few in number, require high reliability, and are not demand supported in terms of the replacement time and quantity factors associated with the standard supply system. The low density of the systems, and their accelerated acquisition and fielding has also precluded, on occasion, the full application of cataloging functions, and many of the NDI systems now onsite are devoid of national stock numbers (NSNs) for the individual parts and components.

b. The logistical support of NDI equipment characteristically requires intensive management. Because of the low density, nondemand supported nature of NDI, there is a substantial amount of local purchase activity for part numbered repair parts, as well as a requirement for an engineered stockage policy that encompasses both demand supported and nondemand supported items.

c. There is a compelling need for technology. It can improve productivity and it can compensate for manpower or investment shortfalls. This is a prime consideration in an era of fixed end strengths. But the imperative is that technology is essential to remain competitive with, or superior to, our nation's adversaries.

E. THE ISC RETAIL SUPPLY FUNCTION

1. Description

The ISC retail supply system, exclusive of computers and COMSEC, can be viewed in terms of a spectrum similar to the standard system, with a user/operator level (a PLL) supported by a DSU level (an ASL) which in turn interfaces with the NICP/depot level for wholesale supply support.

a. The ISC DSU in CONUS is the CSSF (Central Supply Support Facility) at Fort Ritchie, MD, which supports 138 ISC sites at 122 different locations in CONUS, Panama, Alaska, Puerto Rico, and Hawaii. The CSSF provides supply support to DX facilities in CONUS at Fort Huachuca, AZ. and Fort Rucker, Al, as well as to the individual PLL sites. ISC sites submit automated supply requests directly to the CSSF via AUTODIN for all CE repair parts for ISC unique equipment and systems, that is, for equipment operated solely by ISC such as AUTOVON, AUTODIN, air traffic control, satellite communication terminals, etc. The CSSF has an ASL of approximately 8,600 lines; in addition it receives considerable local purchase support from the Fort Ritchie Office of Acquisition (Purchasing and Contracting) because of the need to obtain repair parts which are not managed centrally by the wholesale system, generally either part numbered items, nondemand supported NSN items, or NSN items coded for local purchase.

o The CSSF stocks many items which are not demand supported; for the 6 months period ending June 1984, 48% of the CSSF ASL was not demand supported. (In the two AMSF's discussed below, the percent of nondemand supported lines is much higher). This is a characteristic of the engineered stockage necessary to support low density, NDI/commercial type equipment. Over the same period, 22% of the ASL lines were part numbered, with 78% having NSNs.

o The CSSF passes all requests (requisitions) to the wholesale system for demand supported stockage items which they are unable to fill, for direct shipment to the PLL sites, as opposed to high priority only as in the standard system. When prescribed demands (3 demands in 180 days) are recorded for a PN item, catalogue support/assignment of an NSN is requested via DA Form 1988, through the AMC Catalogue Data Agency, from the wholesale system.

o The CSSF is integrated with the Consolidated Property Office at Fort Ritchie, and there is a single ASL operated under SAILS-AB. They do not have visibility, per se, over that portion of the ASL which supports their mission critical activities (the ISC PLL sites), and acknowledge that it would be helpful if a system architecture for their operation were developed which would enable specific visibility over the mission essential assets.

o The local purchase activity in support of the CSSF is considerable. There are approximately 500 local purchase requests monthly handled at Fort Ritchie, of which an average of 60% are for ISC mission items. They have built-up an indepth knowledge of the vendors, dealers and manufacturers associated with the CE type items involved in the ISC sytems, and we made the observation that the people involved were highly motivated toward responsive support to the customer. Currently, the Office of Acquisitions is running a test on direct vendor delivery to the PLL sites, with payment on vendor invoice. To date, experience is favorable and an expansion of this distribution mode is indicated. See exhibit III-2 in Appendix E.

b. In the overseas areas, ISC units receive supply support for ISC unique equipment from Area Maintenance and Supply Facilities, the AMSF-Europe located in Mannheim, Germany, and the AMSF-Pacific located in Okinawa, Japan. The two AMSF's receive supply requests from the PLL sites, and in turn, submit requisitions direct to the wholesale level. They do not go through the theatre MMC. The AMSFs operate on the DS4 system. AMSF-Eur is contractor operated by Federal Electric International, Inc; AMSF-Pac is a military TDA unit. As mentioned, the AMSFs stock a very high percentage of nondemand supported lines; 71% of the AMSF-Eur ASL and 80% of the AMSF-Pac ASL are *not* demand supported. Again, this is characteristic of the engineered stockage necessary to maintain the high availability rates prescribed by the DCA, and wherein the equipment is low density and unique. See exhibit III-3 in Appendix E.

o An example of AMSF support vs the standard system was provided by HQs ISC. The ANTSC-85 and 93 Tactical Satellite Terminals were intended to be supported by the standard system in Germany/Europe. The best the standard system (supply and maintenance thru normal channels) was able to do was to keep 7 out of 12 in an operating condition. The terminals were shifted to the AMSF-Eur with the concurrence of Command officials, which is able to keep 11 out of 12 in an operating condition. ISC ODCSLOG personnel stated that this was not an unusual circumstance.

c. The ISC system receives its wholesale support principally from the Defense Electronic Supply Center (DESC) and the Communications Electronic Command (CECOM), DESC actually provides the larger volume; for the one year period ending May 1984, DESC filled 84% and CECOM filled 16% of all requisitions submitted or passed by the CSSF (CECOM manages 60,000 stock fund secondary items; DESC manages 825,000). Nonetheless, CECOM is their primary NICP because of their end item responsibility. The Satellite Communications Agency (SATCOMA), a subordinate organization of CECOM, is the Project Manager/procurement agency for satellites and terminals, and the Communications Systems Agency (CSA), a joint AMC-ISC organization, is ISC's major items procurement agency and materiel developer. CSA is co-located with CECOM at Fort Monmouth. The Commander of CSA is the PM, DCS (Army).

d. An appreciation of the nature of the composition of the ISC inventory is essential for an understanding of the ISC supply environment. The low density, non demand supported, commercial or non-developmental type of equipment manned by ISC runs the entire spectrum from aging voice and digital communication and switching systems to state-of-the-art high technology in satellite terminals and systems.

Because of the need to field current technology in critical communication systems, the ISC inventory mix is moving toward a greater amount of nonstandard/NDI items. The following chart portrays this trend.

END ITEMS SUPPORTED BY CSSF

	Sept 1981	June 1984
Number end items supported	6708	6273
Number standard	2110	1682
Percent standard	31%	27%
Number nonstandard	4598	4591
Percent nonstandard	69%	73%

e. The following profile of the three ASL operating components of the ISC retail supply system recaps their relative size and nature:

PROFILE

(as of June 1984)

	CSSF	AMSF-Eur	AMSF-Pac
Number lines on ASL	8600	15240	12470
Percent demand supported	52%	29%	20%
Percent nondemand supported	48%	71%	80%
Operating system	SAILS-AB	DS4	DS4
Dollar Value of ASL	$2,070K	$10,300K	$12,800K
Type organization	civ/mil TDA	US Cont.	mil TDA
Number of persons	*	322	141

* functions as an imbedded part of the installation Consolidated Property Office.

2. History and Background

The CSSF and the AMSF concept both were established out of necessity, and the establishment of both was supported by a formal study. The AMSF concept was established first.

a. The AMSF Concept.

The AMSF concept was developed in Southeast Asia during the Vietnam War, and was initially concerned with the need to logistically support the Integrated Wide Band Communication System - Vietnam. Because the equipment was unique in that it was not in the hands of conventional MTOE units, on site PLLs were established for organizational supply and maintenance, with direct support supply and maintenance furnished on an area basis by supply and maintenance facilities tailored to the needs of the sites within the supported area. Contact teams were employed, and stockage requirements were determined, as necessary. There were two AMSFs operating in Vietnam and one in Thailand. Subsequently, there were AMSFs operating elsewhere, as well. During this early period, the DA DCSLOG was concerned with developing a viable means of maintaining these fixed site systems in Southeast Asia, and tasked AMC to conduct a study to determine the best method from among feasible alternatives. This study, chaired by Hugh Foster (MG, USA), and called the Foster Study, was released in October 1968, and institutionalized the AMSF concept. The study dealt with the whole range of ISC operated equipment and included AUTODIN, AUTOVON, AUTOSEVOCOM, microwave systems, antennae, terminals, and the Defense Special Security Communication System. There was fine tuning of the AMSF missions and structure over-time, with the DA DCSLOG providing definitive guidance on stockage levels, maintenance allocation, funding responsibilities, etc., but the concept has remained fairly consistent.

b. The CSSF.

The CSSF was established as a result of a study by Braddock, Dunn and McDonald (BDM), released on 14 June 1974, which concluded that a centralized supply facility at Fort Ritchie and a DX at Fort Huachuca would provide the most responsive retail logistics support for ISC (then ACC) in CONUS. Prior to the study, the CONUS operating system in support of ISC sites consisted of very large PLLs at all of the CONUS installations, which placed supply requests upon the respective Installation Supply Office; however, the installations did not stock the largely nondemand supported repair parts needed to back up the PLLs. Since the majority of the required items were non-NSN repair parts for low density, nonstandard, commercial/off-the-shelf equipment, it resulted in fragmented local purchase efforts throughout CONUS in addition to the large, mainly nondemand supported PLLs. Responsive support was non-existent. The BDM study, chartered and approved by DA DCSLOG, made a comparative analysis of the effectiveness of the standard system vs a centralized supply and DX system and concluded that under the standard system, demand satisfaction was inadequate, OST was excessive, and local procurement methods were not cost effective, but with a centralized supply facility (at Fort Ritchie, and a central DX at Fort Huachuca) realistic stockage objectives could be established, OST could be reduced, demand satisfaction could be improved, and more economical procurement actions could be initiated. Upon approving the study, DA DCSLOG authorized the CSSF and DX to be established on a one-year trial basis, and tasked the Logistics Evaluation Agency to monitor and validate the concept. The CSSF was established over the 1976-1977 time frame and subsequently approved as a result of the LEA evaluation. It was again validated by LEA in the 1981-82 time frame. LEA found that the principal factor in the validation was that the CSSF provided support to ISC sites in CONUS with an overall average OST of 27.33 days vs an OST of 37.69 for the standard system. In addition, LEA found that the CSSF was cost effective. Originally, the CSSF ASL was composed of approximately 42,000 lines in support of 135 PLL sites at 90 different installations; currently the ASL is composed of approximately 8,600 lines in support of 138 PLL sites at 122 installations. It should be noted that ISC has been aggressive in their PLL reduction program. The aggregate number of lines among the 138 PLL sites has been reduced from 50,200 lines in June 1982 to 29,600 lines in June 1984.

3. Comparisons with the Standard System.

a. The comparison of the ISC retail supply system to the standard system can be made qualitatively and quantitatively. The similarities are such that the standard system could be called the general purpose standard system and the ISC system could be called a special purpose standard system. The ISC system uses standard operating systems (SAILS-AB and DS4), standard forms (DA Form 2765, DD Form 1348), standard procedures (MILSTRIP, MILSTAMP, UMMIPS), standard distribution (DSS, ALOC, PP, UPS), the standard communication system (AUTODIN), goes through the DAAS, interfaces with the LIF at the LCA, and obtains their wholesale support from AMC and DLA. In short, the ISC system differs from the standard system about the same extent that a nondivisional unit based upon a nondivisional DSU differs from a division unit based upon a division DSU. Differences from the standard system qualitatively, that is, in terms of organization, structure, and function, are a result of the nature of the ISC end item inventory: low density, non-standard, nondemand supported, NDI or commercial design, requiring an engineered stockage policy.

b. Quantitative comparison pertains to performance expressed in terms of measurement against the DA standard for supply support activities (SSA). In almost all cases, the ISC SSAs exceed the DA standards. The most compelling of all indicators, however, remains order ship time, wherein an actual comparison between the standard and the ISC systems can be made, based on actual measurement of the time required to meet a supply requirement at a specific location.

o Portrayed below is a representation of the ISC system in terms of conventional performance indicators for SSAs against DA standards or management levels as specified in AR 710-2. Data presented is either an average or a point in time as of June 1984:

DEMAND SATISFACTION

	CSSF	AMSF-Eur	AMSF-Pac
	92%	80%	79%
DA Objective	82%	75%	75%

ASL TURBULENCE

	CSSF	AMSF-Eur	AMSF-Pac
	*	6%	5%
DA Objective		15%	15%

* no valid data

ZERO BALANCE WITH DUES-OUT

	CSSF	AMSF-Eur	AMSF-Pac
	*	3%	1%
DA Objective		8-10%	8-10%

* CSSF does not create dues-out

MATERIEL RELEASE DENIAL RATE

	CSSF	AMSF-Eur	AMSF-Pac
	.5%	.3%	1%
DA Management Level	5%	5%	5%

C. The ISC system OST clearly is superior to the standard system OST because it is a function of the intensive management of the stovepipe system dedicated to the support of low density, nondemand supported equipment.

o Portrayed below is OST in support of ISC detachments at 28 specific locations in CONUS, over time. The OST average was determined by subtracting the Julian date in the document register request number column (A), from the Julian date in the date completed column (M), totaling the answers and dividing by the number of requests. (This methodology was used consistently over this time frame). The type of items extracted from the document registers for the CSSF were CE repair parts only. The type of items extracted for the host installation were general in nature (all materiel categories) and not limited to CE repair parts:

COMPARISON OF AVERAGE OST's FOR THE CSSF vs THE STANDARD SYSTEM

	PERIOD	CSSF	HOST INSL
*	Early 1974	N/A	47.0
**	1 Jan - 30 Sept 81	27.9	37.7
***	1 Dec 81 - 31 May 82	20.8	35.8
***	1 Jul 83 - 31 Dec 83	19.4	39.4

* Computed by Braddock, Dunn & McDonald

** Computed by LEA Validation Study

*** Computed by 7th Signal Command, ISC

o In other words, the above data says that, using the time frame 1 July 83 - 31 Dec 83 for example, the average time for an ISC Detachment at a CONUS installation to obtain ISC unique repair parts from the CSSF was 19.4 days, and that it took 39.4 days to get all other requisitions filled, to include non-ISC unique CE repair parts, from or through their host installation.

o To obtain an assessment of the relative OST for the two oversea AMSFs as well as to have an independent assessment comparing the CSSF with the standard system in CONUS, we requested the Logistics Control Activity (LCA) to provide us OST data from the Logistics Intelligence File (LIF) with precise parameters for a one-year period. Specifically, the

LCA provided the following data wherein requisitions for CONUS were confined to CE repair parts for 20 specific installations. ISC requisitions went through the CSSF to CECOM or DESC; installation requisitions went straight to CECOM or DESC. Overseas, the data represents CE repair part requisitions only from the AMSFs to CECOM or DESC, measured against CE repair part requisitions from the same geographical areas through the standard system to CECOM or DESC. (The time frame is the 1 year period ending 31 May 1984):

COMPARISON OF THE AVERAGE OSTs FOR CSSF vs THE STANDARD SYSTEM

	CSSF	STD SYSTEM
20 installations in CONUS (IPG 1, 2, 3)	20.5	33.3
20 installations in CONUS (IPG 3)	15.2	24.2
Panama (IPG 3)	27.1	33.1

COMPARISON OF THE AVERAGE OSTs FOR AMSF's vs THE STANDARD SYSTEM

	AMSF	STD SYSTEM
Germany (IPG 1, 2, 3)	36.8	38.3
Germany (IPG 3)	35.6	39
Okinawa/Japan (IPG 1, 2, 3)	32.9	23.9
Okinawa/Japan (IPG 3)	35	25

o In each case above the ISC system has a shorter OST except for Okinawa/Japan, where the standard system excels by 9 to 10 days. The Pipeline Segment Analysis of the LCA print-out reveals that the first and last nodes (in-theatre processing, SSA processing) account for the entire difference. A plausible explanation for this lies in the fact that the primary support effort for AMSF-Pac, located on Okinawa, is in Korea, which probably results in an accompanying time lag or inefficiency in processing. This disparity has been furnished to the DCSLOG ISC.

d. From the above, it can be seen that the ISC system, specifically the CSSF in CONUS, and the AMSF-Eur is providing responsive support to the ISC operating elements in the field, and with the exception of OST for Okinawa/Japan, to a degree that is not matched by the standard system.

F. UNIQUE CHARACTERISTICS

There are several significant unique characteristics of ISC; some of these pertain directly to the organizational structure, missions, and functions of ISC, and some pertain to the ISC dedicated retail logistics system. However, they all bear directly on the need for an intensive management system to provide the responsive supply and maintenance support necessary for successful mission accomplishment.

1. DCA Support.

The role of DCA and the relationship of ISC to DCA places ISC in the position of having to serve two masters. DCA is the proponent for the DCS, and assigns to ISC the operational requirements for the Army's part of the DCS; as the combat developer for the DCS, they assign materiel developer requirements to ISC, which are generally performed by CSA, a subordinate agency of ISC. ISC is answerable to DCA for the operational performance of the Army's part of the DCS. As a MACOM of the US Army, ISC is also answerable to the Army for mission performance.

2. Operational readiness (99+%).

The DCS must be capable of performing its mission in situations ranging from peacetime to nuclear war. The DCA is responsible for the DCS, which must be responsive to the communication needs of the National Command Authorities, the JCS, and the various commanders of unified and specified commands. Accordingly, the DCA has specified operational readiness rates for the DCS operating systems to insure a level of availability consistent with their mission. In essence, these availability rates are geared to the maintenance of a communications system commensurate with missile launch time. These availability rates are all exceptionally high, and require an intensively managed, dedicated supply and maintenance system because the allowable window for downtime is small.

3. High Technology.

NDI technology in the electronics area has brought forth an incredible capability in the communication, computer application area. Satellite communications, microwave transmission, miniaturization, fiber optic networks, etc. enable command and control to be exercised over vast distances without regard to atmospheric or geographic conditions and with a degree of reliability that is impressive. Technology break-throughs have been enormous in import; the rapid advances in technology in the C-E field have long surpassed the normal development cycle and have driven the materiel developers to pursue the acquisiton of NDI in order to capture current technology and field state of the art systems or equipment. This is being done by the acquisition of commercial, off-the-shelf equipment already in the inventory, with or without modifications. The alternative is to field an obsolescent system, or to incur an unacceptable delay. At the current time, over 70 percent of the end items in the ISC CONUS operational inventory is NDI, and the trend is upward.

4. Density; Remote Locations.

The equipment and systems with which ISC performs its missions, particularly the Army's part of the DCS, and communications for echelons above the Corps, tend to be low density and/or spread out over a number of small remote locations. The satellite communications ground terminals that ISC operates as a part of the Defense Satellite Communications System are strategically located based upon network architecture conditions. The telephone exchange systems in place in CONUS are commercial design and tend to be tailored to the needs of the individual installations. There are many different makes and models. The low density of equipment results in a large percentage of required replacement of repair parts being nondemand supported. Similarly, many of the parts of commercial design NDI equipment do not have NSNs.

5. TDA Organizations.

ISC is composed largely of TDA organizations, primarily because the operating elements are tailored for the specific mission or purpose. The ISC logistical units are all TDA; the AMSF-Pac is a military TDA organization, and the AMSF-Eur is a TDA manned by a U.S. contractor, Federal Electric International, Inc. TDA organizations tend to have a different mix of equipment, different one from the other as well as from TOE units, which contributes to the nondemand support nature of repair parts requirements.

6. Engineered Stockage Policy; Local Purchase Requirements.

a. Low density items require an engineered stockage policy in lieu of demand support. Additionally, the supply and maintenance support of NDI results in significant local purchase because of the substantial volume of part numbered (non-NSN) requirements. One is a function of the other. Nondemand supported repair parts for a piece of commercial equipment does not qualify for cataloging support (conversion of PN to NSN) until there have been 3 demands in 180 days, nonetheless, the items are required stockage at the PLL and ASL levels for mission essential purposes because of the need to meet the high availability rates established by the DCA. Demand is captured by the ISC supply support activities, and cataloging support is requested (via DA Form 1988) but after the assignment of an NSN, the NICP may code the item for local purchase because of its low density. The net result is that the ISC system results in significant local purchase activity.

b. The engineered stockage policy can be illustrated by an examination of the ASLs in the ISC system. The ASL of the CSSF at Fort Ritchie has (as of June 1984) 8,600 lines; 48 percent of the lines are nondemand supported, 27 percent of the lines do not have NSNs. AMSF-Eur has an ASL of 15,200 lines of which 71 percent is nondemand supported; AMSF-Pac has an ASL of 12,500 lines of which 80 percent is nondemand supported. An engineered stockage policy is an essential feature of a special purpose system ancillary to the need for dedicated, intensive management of a system that departs from the conventional parameters of the general purpose, or standard system. The management polices of the standard system are based upon high density, demand supported items with predictable consumption or usage rates. The ISC is unique in this regard.

c. There are examples, new and old, of the inability of the standard system to adequately support the low density, nondemand supported, NDI prevalent equipment of ISC.

o The origins of the CSSF and the AMSFs are a case in point. (See Section III. E 2 for history and background). These supply support activities were established out of necessity based on formal studies that considered alternative courses of action because the standard system was not responsive to the unique needs and circumstances of ISC.

o The ANTSC-85 and 93 tactical satellite terminals were designed to be supported by the standard system in Germany/Europe. The standard system was only able to keep 7 out of 12 in an operating conditions. The support of the terminals was shifted to the AMSF-Eur, which is able to keep 11 out of 12 in an operating condition.

o There is a substantial quantity of ISC unique equipment at the Signal School, Fort Gordon, GA, which is used to train ISC soldiers. The Signal School is using the standard system to obtain supply and maintenance support for this equipment, submitting their requests to the DIO. Because of the unique nature of this equipment (low density, NDI, etc) the School was experiencing considerable difficulty in keeping the equipment in an operable condition. The need for intensive management to enhance the responsiveness of the supply system led to the development of a critical items list for stockage of a C-E ASL of 7,300 lines of which approximately 75 percent are nondemand supported, and of a 530 line DX, both necessary to insure an uninterrupted training posture in the school.

Additionally, there is considerable local purchase activity in the installation Purchasing and Contracting Office for part numbered items. In essence, the situation at Fort Gordon paralleled the situation that existed at the various installations in CONUS prior to the establishment of the CSSF, and is manifest evidence that the standard system does not, by itself, responsively support low density, nondemand supported, NDI equipment which typifies the ISC inventory.

7. Combat Developer; Materiel Developer.

ISC is both a combat developer and a materiel developer. ISC and the Health Services Command are the only major commands in the Army that have this dual responsibility. This distinctive role requires operations and functions by these two commands not common to the other major commands. Generally speaking, these responsibilities are split in the Army, with TRADOC being the combat developer and AMC being the materiel developer. ISC is the materiel developer for requirements established by DCA and TRADOC. ISC is both the combat developer and materiel developer for air traffic control systems, base communications systems, and communication systems in echelons above the Corps.

8. Summary.

The foregoing arguments and discussion clearly describe the unique operating environment of ISC. It differs significantly from the conventional structure of the TOE/MTOE Army. The support requirements, in turn, are unique, and they are being met by a unique system established for the purpose.

SECTION IV ISSUES AND OBSERVATIONS

A. ASSET VISIBILITY

There are 3 perspectives to our interest in asset visibility, all with different connotations, and each is discussed in turn.

1. The Defense Automatic Addressing System (DAAS)

The DAAS, as the AUTODIN interface between the retail and wholesale levels, is the means by which visibility over supply and transportation transactions is provided to the LIF. This form of asset visibility is essential for intransit control, and, as we discussed in Section II A 4, is a prerequisite condition for a standard system. We found no problems with this aspect of asset visibility because the ISC system uses SAILS-AB and DS4 with AUTODIN transmission.

2. CSSF ASL

The CSSF is integrated with the Consolidated Property Office at Fort Ritchie, MD, and there is a single ASL at the installation level, thus the CSSF ASL is imbedded in the installation ASL. Accordingly, there is no asset visibility, per se, over that portion of the ASL which supports the ISC mission activities out in the operating sites (PLL sites). Given the criticality of the ISC mission to the Army and to DCA, and the unique nature of the ISC low density inventory, we believe that specific asset visibility over the CSSF ASL would enhance the management of the ISC CONUS operation. This problem does not exist with the two overseas AMSFs.

3. Asset Visibility - National Level

a. ISC has its own unique asset reporting system entitled LOGMIS (Logisics Management Information System). It was developed to provide asset visibility internally to ISC, although it does contain RICC-1 and RICC-2 codes for items selected as reportable in accordance with AR 708-1 and SB 700-20, and it is an established input to CBS-X. However, there is a significant problem in that there are many items of NDI which do not have RICC codes and therefore do not get picked up into the CBS-X. Thus there is no national (wholesale) level asset visibility over a substantial part of the ISC inventory. This problem is impacted by the Equipment Readiness Code (ERC) system designed to identify items to measure logistics readiness in TOE/MTOE units, which seems to have reduced the perceived importance of RICC designation, since the RICC codes previously were used for this purpose. Inasmuch as the CBS-X is a prime input to derive the Army Materiel Plan (AMP) and the Total Army Equipment Distribution Plan (TAEDP), it should have visibility over all major items in the total active Army inventory. This could be easily accomplished by having the materiel developer (NICP) assign a RICC-2 code to all NDI items, retroactively, i.e., everything currently in the inventory, as well as henceforth as a part of the type-classification, or provisioning process. Authority for this action exists in Table 7-22, AR 708-1. This same rationale pertains to special design and administrative motor vehicles, as well as a host of other materiel categories, which are currently coded RICC-0 and over which there is no national level asset visibility. In the case of special design and administrative vehicles, ISC has hundreds of maintenance trucks which are coded RICC-0 but which are mission essential in every sense of the word. See Exhibit IV-1 in Appendix G for examples of LOGMIS.

b. An associated area of concern is authorization for NDI items, i.e., the process of recording the authorization for NDI equipment in the appropriate authorization document (TDA). Since the acquisition and fielding of NDI is an accelerated process, and is based on alternative requirement processes (BOIP or Teler) the entire matter of authorization needs to be examined and institutionalized, particularly since TAADS is a critical input to the SACS. We did note that ISC has directed the use of the Teler Project Number as an interim authority for the purpose of accountability and recording in the Property Book, but this does not satisfy the need for proper authorization documentation.

c. We were advised at several locations that there was a problem in securing TDA authorization for NDI equipment. In most all cases, whether there was a problem or not, the process was lengthy, and it was not unusual for it to take three management of change (MOC) windows for final action. ISC has a procedure associated with property book accountability that impacts this. It involves the deferral of property book posting for the items of equipment on a Bill of Materiel (BOM) for a UNISTAR project until after installation and testing has been completed. A UNISTAR project is one staged through an AMC depot and subsequently shipped to an operationg unit. The time interval between receipt of the equipment, installation, testing, correspondence concerning the Equipment Authorization Letter, property book posting, and final TDA authorization can be considerable. Since property book accountability is a precursor to authorization, we believe that this deferral procedure is not in the Army's best interest.

B. CATALOGING

Cataloging and the assignment of NSNs is an off-line activity of considerable magnitude within the ISC inventory because of the large volume of NDI systems/equipment. Under the normal development and acquisition cycle, maintenance engineering during the initial provisioning process routinely results in NSN assignments to repair parts, but under the accelerated acquisition of NDI, many end items are fielded without NSN assignment to all component/repair parts. The assignment of NSNs then becomes a function of capturing 3 demands in 180 days and a sequential action known as the part number conversion program. Capturing the demands is an automated function in SAILS. Initiating the P/N conversion process is manual or off-line. The acquisition of a P/N item at the CSSF is normally by local purchase, and the request for cataloging support is by submission of DA Form 1988. By acknowledgement of management at both the CSSF and at the CECOM NICP, only 50 percent of such requests result in final action, the other 50 percent fail because of "poor data", "insufficent data", "cannot identify", etc. We have examined the CSSF SOP as well as discussed this issue at length with CSSF management and believe that they are doing a credible job in this area; the problem is that manual, off-line processing is not adequate. There is currently a MRSA program to extract P/N transaction data from SAILS at 6 months intervals, off-line, and provide this data for P/N conversion purposes. This is an interim program. Over the longer range, there is now underway a change to SAILS and DS4 which will capture a host of retail level transactions and automatically provide the output to the Central Demand Data Bank at the LCA. Among the transactions to be captured are local purchase, P/N, DX, warranty, and others. In discussing this effort with senior members of the LCA and The Logistics Center, we were advised that it is a priority effort but that slippage could occur due to funding constraints. This effort will pay-off well for the Army and should be completed as soon as possible.

C. MATERIEL ACQUISITION

The materiel acquisition process and relationships have been discussed elsewhere; SATCOMA and CSA both engage in accelerated acquisition and fielding programs involving NDI. We made the observation that the requirements of ILS are being incorporated into their accelerated process where they have application, and that the provisioning/fielding of systems was improving accordingly.

1. Initial Provisioning

a. Initial provisioning for NDI items is not as precise nor accommodating as developmental programs. Obviously some of the primary objectives of ILS are not applicable or achievable, particularly the need to influence design. We discussed provisioning with both the user (ISC) and the provider (PM) and problems were acknowledged by both. Maintenance engineering models to determine repair parts requirements are not precise; SLAC decks are sometimes a hand-off from the manufacturer and they can be large and voluminous without any discriminating data. In some cases, this kind of data is not available because experience or history does not exist, and Logistics Support Assessment (LSA) input into the models results in inadequate provisioning with the subsequent result that NSNs are not assigned, and nondemand supported stockage at the PLL and/or ASL level results in local purchase activity. Provisioning for NDI has the potential to get better. It is important to integrate cataloging support activities, particularly NSN assignment, to the fullest extent, so as to minimize the need for off-line action.

b. The entire provisioning process is complex and neither well understood nor appreciated by many in the Army, to include important decision makers in the budget process and materiel acquisitions arenas. Certainly the full significance of NSN screening/assignment falls into this category. The AMC process for NSN screening/assignment, from the Provisioning Conference to the broadcast of the AMDF change notice takes up to 226 days. This seemingly innocuous process has enormous impact on the subsequent life cycle management of an item, since it is the initial determinant whether it is to be centrally managed or not. This same model can be adapted to the accelerated acquisition of NDI, but it does not yet have sufficient priority for implementation. This important process should be applied in all acquisition strategies because the potential pay-off to the Army is high.

2. Fielding

SATCOMA and CSA field their systems to ISC in response to requirements established through the Teler System. In applicable cases, site surveys are conducted; staging areas are used; and Bills of Materiel (BOM) identify, account for, and transmit the constituent parts. Installation is normally by CEEIA if the system is going into a fixed site. Materiel Fielding Plans (MFP) outline tasks and responsibilities and sequential steps involved. The MFP is the principal coordinating vehicle for fielding, and it deserves wide distribution and careful attention.

Because ISC systems may have component or associated items that are supportable by the standard system, SATCOMA and CSA should insure that the appropriate MACOM commander, logistician, and MMC are included in the distribution of the MFP.

3. Designation of RICC-2

As discussed under asset visibility, there is no national level visibility over much of the ISC NDI equipment. This void could be eliminated if the MRC designated as RICC-2 all appropriate NDI equipment during the acquisition process. It would then be visible in CBS-X, following the LOGMIS input cycle.

D. TECHNOLOGY CHANGES

Technology is definitely a driver in the information mission area. Technology changes are so rapid, and so consequential, that acquiring state-of-the-art capability mandates an accelerated acquisition cycle; this is met through the acquisition of NDI, commercial, off-the-shelf items which can be fielded with little or no modification. There is no viable alternative to NDI in this field, because the needs and requirements of the National Command Authorities (and other responsible commands or agencies) cannot be met with a developmental process which results in fielding an obsolete capability. It should be noted that the need is not to avoid fielding an obsolete system as much as it is to capitalize on current or emerging technology. The stakes are high--the issue is national defense, or survival. So the points to be recognized are that the nature of the ISC inventory is shaped by technology, and that it is not a discretionary matter, it is out of necessity. And the low density, NDI, nondemand supported equipment and systems must be supported by a special purpose system that is fitted to the job. Conceptually, the ISC dedicated retail logistics system is that special purpose system.

E. INTEROPERABILITY AND INTERFACE: ADP SYSTEMS

In Section II we undertook to supplement the definition and description of the standard supply system by providing a derived definition that listed the conditions that must be fulfilled or met. One of those conditions is the establishment of an interface or an interoperability capability with the other logistics and documentation systems. We satisfied ourselves that the ISC (special purpose) supply system qualifies as a standard system because all of the listed conditions are basically fulfilled, or satisfied. However, insofar as interoperability and compatibilty are concerned, there are two shortcomings that deserve comment.

1. Cataloging Support

As we have discussed elsewhere, there are many P/N transactions in the ISC system. SAILS and DS4 do capture demands, but requests for NSNs is an off-line process, requiring the submission of DA Form 1988.

This process is cumbersome and does not adequately meet the needs of cataloging and results in as many as 50 percent of the requests for NSN failing in consummation. An interim program by MRSA has had systems induced interruptions and has not therefore been consistantly applied. It appears that the best alternative to provide a real time solution is the Central Demand Data Bank at LCA which will pull this data from SAILS and DS4 on an after the fact transaction basis. This important capability will substantially overcome this shortcoming.

2. Accountability

ISC has manual property books throughout the organization. The system is burdensome, and does not capitalize on the capability of reconciliation, update, and file maintainence by automated means. Furthermore the manual PB system has to be rolled up into LOGMIS, the asset reporting system of ISC, which itself is then an input to CBS-X. There are associated factors that impact on the property book; the fielding of NDI under the Teler System requires a disciplined effort to insure that property is picked up on the property book in a timely manner because interim authorization authority is used (the Teler Project Number). When the authorization is finally entered onto the appropriate authorization documents affecting the TDA, a subsequent entry in the property book is required. ISC is using an Equipment Survey Team to go to the field to assist/oversee in the posting of property to the property book, and we were advised that it is working well. It is, however, an expedient. ISC needs an automated property book system.

F. TRAINING

In conjunction with the study, observations were made concerning the training of the people involved in the ISC supply system and the doctrine upon which the training was based. This sub-section will focus on the training of people pertaining to the supply system in general and the ISC special purpose system.

1. Background

a. Generally speaking, there is no formal training in the operation of the ISC supply system. Enlisted soldiers are graduates of the general supply clerk or PLL MOS courses (76Y or 76C). Whatever training in the ISC systems is required is provided by OJT. This training is strictly vocational in nature, or the "How To Do" type of instruction. We found no specific instruction for officers as to how the unique system operates. Officers receive their training as far as we could determine from OJT, the teachings of their leaders or their predecessor, or by individual study. As an estimate, probably 95 percent is of the "How To Do It" variety. Few if any are taught the "Why", and if the truth would be known, there are probably only a few who know why the system was created or needed.

b. One of the observations of the study is that not only do the people who operate the system from within know little of the "Why" and learn informally as far as the "How" is concerned, the same is true of people outside the system. We found few people who understand or know of the requirement imposed by the National Command Authority and OSD instrumentalities. Another significant observation is that when we attempted to compare the ISC system to the standard supply system, professional logisticians found it difficult to describe the difference. Most had perceptions, which were often in error. The failure is not that of individuals, but rather an institutional failing in that we do not teach in our school system what these systems are, nor do we provide professional development classes, either by teams or by instuctional material. Most people we talked to know their own job very well. They had a fairly good idea of what went on one echelon up and one echelon down. Beyond that, things were vague, both within the ISC logstics system and within the logistical system as a whole.

2. The Need

a. This is extremely frustrating to well meaning and well intentioned professionals. The lack of understanding is very apparent, and will only be solved by standardized instruction either in the schools, by Mobile Training Teams or by a combination of both, coupled with training literature that is understandable.

b. When one describes a "standard logistical system" we believe what is really being described is an approved system, rather than a standard system. Standard systems should be based on uniform functions or conditions, such as providing fund cites, asset visibility, accountability, as well as interface and interoperability with other systems. It is recognized that there will be differences in the functions of distribution compared to requirements and/or transportation. Nevertheless, there are certain common functions that should provide horizontal as well as vertical interface. In that context, there are few truly "standard" systems, but many "approved" systems. The schools do not teach either to any great extent. We were informed at Fort Gordon that very little was taught to the officers beyond the principles of general supply.

3. Summary

In summary, there is little specific training of a formal nature concerning the ISC system. Most individuals involved in it must, by their own efforts, learn the system and its relationship to the general logistics systems.

G. RELATIVE ECONOMY

One of the requirements of this study was to consider the cost effectiveness of the ISC supply system in comparison with the standard system. While statistical performance data such as OST can be evaluated, the overall comparision must be largely subjective because of the mission demands of the ISC environment, which requires special management regardless of the prescribed support system. Our overall judgement reflects total net worth, considering both effectiveness and cost and, in the final analysis, mission performance was the driving factor.

The key elements of the ISC system to be evaluated are the CSSF in CONUS (plus Alaska, Panama, Hawaii, and Puerto Rico), and the AMSFs in Europe and the Pacific. The CSSF provides only supply support while the AMSFs are full MMCs, providing both maintenance and supply support. The background, functions and performance data on these special ISC activities were covered in Section III of this study and will not be repeated here except as a basis for overall observations and conclusions. To gauge how the ISC system stacks up and whether or not it performs in a cost effective manner, we will examine the CSSF and the AMSFs in turn.

1. CSSF

a. The CSSF was established to do three things: first to provide better supply response in terms of order ship time; second, to reduce the overall PLL stockage required at the many sites by establishing a consolidated ASL at Fort Ritchie and third, to reduce the fragmented local purchase efforts at the installation level by centralizing at one location. Major considerations for doing this were discussed earlier in Section III; the underlying factors being the very high operational readiness requirements; the large number of sites, many remote; low density equipment; and the need to maintain nondemand supported stockage.

b. The CSSF has been successful in meeting its operational goals. OST was reduced significantly below comparable expectations from the standard system. The statistical advantage ranges from 10 days or more depending on the sample and the date of the check. Also, the consolidated ASL has led to a major reduction in the number of PLL lines which existed to support the many separate sites prior to the advent of CSSF. The overall reduction since CSSF has been on the order of 80 to 85 percent; from the period June 1982 to June 1984 alone, PLL lines were reduced from about 50,200 to about 29,700.

c. A review of the effectiveness of the CSSF was made by the US Army Logistics Evaluation Agency in 1982. Their report, Evaluation of the Centralized Supply Support Facility (CSSF) at Fort Ritchie, MD, specifically addressed the cost effectiveness question. As the CSSF was consolidated with the Fort Ritchie Central Property Office, there was only a limited amount of additional overhead added to perform the consolidated ASL function. LEA identified an estimated six spaces which could be associated with the CSSF ASL; and while not specifically quantifiable, these six spaces were probably more than offset by the decreased effort associated with reduced PLL at the various sites. Since most of the savings at the sites translated into fractional manyears, it was not practical to add up whole spaces, but the conclusion was that CSSF had little or no additional net demand on manpower resources. More significant was the reduction in overall PLL stockage with attendant savings. This, combined with the better response in terms of OST, led LEA to conclude in their 1982 report that CSSF was cost effective. Our review confirms the observations and conclusions of LEA. If anything, the advantages have increased since 1982, particularly with the additional reduction in the lines being carried.

2. AMSF

a. The AMSFs are broader in scope than the CSSF in that they provide ISC unique logistics support for both maintenance and supply, and the AMSFs in both Europe and Okinawa perform all the functions of a MMC. The AMSFs, as described in Section III, were born of necessity and tailored to provide the specific needs for ISC equipment in theater. The maintenance concept reflects variances from standard and departs from the conventional maintenance allocation for the Army. Supply support is similar to that provided by the CSSF in the U.S. Like the CSSF, the AMSF must provide supply support for a number of isolated sites. Equipment to be supported is unique, low density, generally NDI, and the operational readiness requirements are extremely high. This leads to the need for engineered stockage, largely nondemand supported; and, in fact, 80 percent of the ISC ASL in Europe is nondemand supported. Unlike the CSSF, however, the AMSF does only a limited amount of local procurement. Once a supply request is forwarded to the

NICP, it is automatically in the standard system, and shipments to the theater take advantage of DSS, including ALOC.

b. Although this study focuses on the supply aspects, the relative value of the AMSFs must be based on their total logistics support function, both maintenance and supply. Looking at the supply side only, however, we concluded that the advantages were very much the same as for the CSSF. Stastistics show supply response which is better than could be expected using the standard system, with the exception of OST for the AMSF on Okinawa which is explained in Section III, and the consolidated ASL reduces the need for large PLL stocks which would otherwise be needed to support operational readiness standards at the sites. We concluded that the essential supply functions in support of ISC equipment would require approximately the same personnel effort using the AMSF as would be needed if this responsibility were placed with any other MMC or combination of MMCs in theater. This judgement is reinforced by the experience with the CSSF in the U. S. Also, any unique overhead associated with the AMSF must be allocated to both maintenance and supply.

c. While direct dollar comparisions with the standard is not practical, since any solution must be hand tailored, we consider the AMSF to be cost effective. It meets specific mission needs, and appears to be more responsive than could be expected through the standard system. The study team could not visualize any other procedure, given the current situation and real life requirements, which could do the job as well and at less overall cost in terms of resources. Accordingly, we believe it meets the litmus test for cost effectiveness. This conclusion is also reached if an assessment is made on the basis of relative economy. Quite simply there would be no space reductions under an alternative system. Inventory investment costs would most probably increase. The engineered stockage policy required for this kind of an inventory is being specially managed now; under a less intensively managed environment, it could well lead to an increased stockage similar to the pre-CSSF era. Transportation costs would be a wash. ISC is exercising good supply management. All of these considerations support the cost effectiveness of the ISC supply system.

3. Summary

Based on our criteria that the mission is the driver, and that any alternate system must provide the level of performance which meets mission needs, we have concluded that the ISC unique system is as cost effective in performing ISC supply support as the standard system or as any alternate system at this time, and concurrently is more responsive to ISC specific requirements.

H. TRANSITION TO WAR

1. Background

a. A requirement of this study was to evaluate the ISC system on its capability to transition to war. To be able to have a wartime operability, one must transition to a wartime status from a peacetime way of doing business. Fortunately, the high readiness and reliability standards set by the Defense Communications Agency, and by the Army itself, tend to make the transition to wartime operation somewhat simpler in the communications-electionics information field compared to other military functional fields. People use ISC facilities and networks daily in both peace and war.

2. The Concerns

There is no question that ISC and its subordinate commands are fulfilling their day-to-day mission with a high degree of readiness and reliability. Nevertheless, there are areas of concern.

a. First of all, in the field of doctrine, ISC and TRADOC have a memorandum of understanding (MOU) dealing with the combat development areas of C-E and ATC which are of comman concern to both organizations and which assigns to ISC the responsibility for the interface between EAC and the Corps. The MOU was signed by the Chief of Staff, TRADOC, and the Commander, ACC in February 1982. At that time, the development of doctrine in EAC throughout the Army was not a priority (concern about which was one of the reasons for the MOU). Much has been done since that time, but many changes have occurred, not the least of which is the change from ACC to ISC, with changes in mission, subordinate commands, and the addition of information as a mission area for analysis. The existing MOU does not take these changes into account, and it should be revised accordingly. In addition, because of the materiel development and fielding implications in the ISC-TRADOC relationship, the MOU should be a matter of interest to the Commander of AMC, as well.

b. A second concern derives from this. The situation involving doctrine impedes the solutions necessary to transition to war as well as wartime operability.

o There appears to be minor concerns in the matter of CONUS war-time transition. The ISC supply system would probably have little or no difficulty in accomplishing its mission as presently structured. Similarly, the AMSF function on Okinawa is aided by the fact that this element is a TDA organization composed of military men and women. It should be noted that both would probably be subjected to personnel levies as the Army expanded in both a transition to war and wartime status. This study did not permit us to travel to either Europe or Okinawa to determine how adequate alternative plans were for disruption of the existing system. In any case, neither the CONUS nor the Far East situation appears to be a matter of concern as far as manning, operations, resources, and support are concerned.

o On the other hand, the situation in Europe is different in that the AMSF is a government owned, contractor operated (GOCO) facility. Contractor operations are not new in wartime and the fidelty and patriotism of civilian employees is not in question. However, third country nationals and U.S. employees not affiliated with the military as reservists or retirees may be subject to national drafts. There are probably status of forces implications that should be considered, also.

o The very nature of ISC operational sites in USAREUR makes the subject interesting. If one considers a multiplicity of fixed sites, usually small but located on prominent landmarks, emitting electronic signature, it is not difficult to assume that these sites will be subjected to prompt and sustained attack. We found a school of thought which believed there would be no problem as the sites would go early in hostilities, and then there would be nothing left to support. This reasoning is cataclysmic, and assumes away the problem.

o Another school of thought assumes that there will be some support required, but the resources in people and things are unknown and difficult to determine.

o It appears that the two schools of thought we have discussed above are a principal concern of the ISC community. While there may be others, these were the two arguments which surfaced when we discussed the question.

o What is needed is some priority placed or realistic planning that assumes sites will be eliminated in any zone of hostilities but that the mission will remain. Operational and logistical planners have a requirement to place priority on this subject so that realistic estimates may be made to continue the support. The DCA has no doubt that the mission will continue. Although it appears that some efforts are underway in this matter, we were unable to ascertain specific actions or status. The AMSF-Eur is operated by Federal Electric, International. There are military retirees, and perhaps reservists, as well as third country nationals among the work force. There is a compelling need to make definitive plans for a continuity of operations and a reconstitution of the facility and the work force if need be. ISC should consider all viable alternatives and finalize plans regarding retention of military retirees and reservists (hip pocket orders), military augmentation from within theatre or CONUS, and/or contractual agreement for wartime service by the current contract organization. We know from the experience in Southeast Asia that the AMSF functions responsively in a hostile environment. What is needed are the plans to insure the transition can be made.

c. A further concern involves logistic support for air traffic control elements in a wartime environment, particularly as it pertains to CONUS TOE ATC units. The 256th Signal Support Company at Fort Rucker is a deployable unit. Currently the 256th performs piece part maintenance (with shop stock) and DX for CONUS based TOE ATC units with back up support from the ASL at Fort Ritchie; however, the ASL at Fort Ritchie is comingled with the Consoldidated Property Office at Fort Ritchie. Although we were advised that the ASL of the 256th was identified and could be separated for deployment purposes, this issue needs to be clearly resolved.

I. SUMMARY

The above issues and observations generally fall into two categories: those areas that need some remedial action for the betterment of the Army, and those which reflect our assessment of the ISC supply system in terms of worth and capability. They do not recast the description or characteristics of the system as laid out in Section III, nor do they address the many good features of the ISC supply system, but clearly they serve as a departure point for the study conclusions.

SECTION V CONCLUSIONS

The following conclusions constitute the study team assessment of the Information Systems Command supply system. These conclusions were formed, not by prearrangement or predetermined bias from previous experience, but by extensive study and discussions during a visit with and by the most informed individuals on the subject.

In one respect, a valid approach to the study would have been to (simply) validate the conditions and circumstances that existed at the time of the BDM Study for the CSSF and the Foster Study for the AMSF. In essence, these conditions and cicumstances still exist; consequently the need for the ISC system remains. Similarly, the reasons why the standard system does not provide responsive support to this special system are still valid.

We believe that each of our conclusions accurately states the situation involving the special purpose supply system operated by Information Systems Command.

CONCLUSIONS

1. The standard system is a general purpose system. General purpose systems are structured to serve high

density, demand supported, conventionally developed and fielded materiel which have fairly predictable consumption/usage rates.

2. Special purpose systems are designed to meet the requirements of the nonstandard, nongeneral purpose system. The ISC special purpose system was designed to serve low density, high (or antique) technology, nondemand supported, NDI items serving special requirements.

3. The ISC system is a special purpose system that meets the conditions of a standard system, i.e., authorization edit, demand history, fund citation, high speed communication, conversion to requisition, asset visibility, audit trail, and interoperability, and which provides responsive support to the ISC unique inventory.

4. The ISC inventory is shaped by technology. Generally operating at fixed sites (installations and EAC), the equipment is characteristically low density, nondemand supported, NDI, and requires special management and training.

5. The ISC system is intensively managed to meet high requirements of readiness and reliability imposed by the national command authorities, JCS, DCA, the intelligence community, and DA.

6. The memorandum of u.derstanding between ISC and TRADOC requires review and revision, especially in view

of the designation of information as a mission area. Because of the materiel development and fielding implications in the ISC-TRADOC relationship, this MOU should be a matter of special interest to the Commander AMC, as well.

7. The acquisition of NDI will increase. Management attention to ILS and provisioning is essential to facilitate the life cycle management of items, particularly the assignment of NSNs and the establishment of adequate initial stockage levels.

8. Accountability appears to be good at the property book level, and SOPs are written to make use of interim authorization for property book accountability purposes. However, authorization documentation lags accountability. The 7th Signal Command has an SOP which requires that property book entries be deferred until certain fielded systems (UNISTAR) are installed and tested. This subsequently delays authorization documentation. Items are frequently issued and in use for mission essential functions long before TDA authorization is obtained. Many items are listed on LOGMIS with no authorization indicated. The manual property book system throughout ISC is burdensome.

9. Asset visibility has two areas of concern. The CSSF ASL is imbedded in the installation ASL at Fort Ritchie and there is consequently no visibility, per se, over mission items of the ASL. Many items in the ISC inventory, as reported in LOGMIS, do not have RICC 1 or RICC 2 codes and are therefore not input to CBS-X.

Thus, there is no national level visibility over these assets.

10. The ISC inventory has many items identified by part number (P/N). The P/N to NSN conversion program is off-line and cumbersome. While emphasis is needed on all aspects of the cataloging program, the implementation of the Central Demand Data Bank at the LCA will provide an early remedy.

11. Few people within or without the logistics community understand the general purpose or the special purpose supply systems, not because of individual fault or failure, but due to the lack of proper instruction in the school system and non-definitive basic regulations.

12. The ISC supply system is capable of a transition to war. It is compatible with established logistics doctrine and is no more vulnerable than the standard system in regard to sites, procedures, transportation and the support mechanism required. Planning, however, needs to be more definitive for effective transition to war.

13. The ISC system is cost effective. It has resulted in reduced inventory investment, improved OST, and more efficient local purchase.

14. Regulations and other written policies at the DA level do not clearly define ISC retail supply functions and procedures. While the ISC system has DCSLOG

sanction, it is not specifically designated an approved Army system or described fully in Army Regulations and other DA publications.

SECTION VI RECOMMENDATIONS

The conclusions of our study, coupled with our issues and observations, have led to a compilation of specific recommendations. These recommendations will improve the supply system from the standpoint of both the Department of the Army (DCSLOG) and the Information Systems Command. We believe that none of our recommendations will require extensive modification to existing systems, nor will they require significant resources; rather, we believe the implementation of our recommendations will result in an improved capability to manage the Army's assets.

RECOMMENDATIONS

1. Retain the ISC unique retail supply system. Retain the CSSF and AMSF(s) concept.

2. Adopt the terms General Purpose System and Special Purpose System. Define the ISC supply system as a Special Purpose System.

3. Base the Signal School, Fort Gordon on the CSSF at Fort Ritchie for supply suport of ISC unique items.

4. Review and update the Memorandum of Understanding between ISC and TRADOC.

5. Provide better guidance and understanding concerning the need for NDI, off-the-shelf, nonstandard equipment, to include acquisition, provisioning, fielding and support.

6. The 7th Signal Command should rescind the SOP provision which requires the deferral of property book accountability for UNISTAR projects until after installation and testing.

7. Automate the ISC property book system.

8. Develop a means to permit an automated extract of the CSSF portion of the Fort Ritchie ASL.

9. Provide asset visibility for ISC items in TDA units. Assign RICC-1 or RICC-2 code for all items to be reported to CBS-X.

10. Improve the conversion of P/N to NSN process (Central Demand Data Bank).

11. Provide better orientation and training on how general purpose and special purpose systems operate.

12. Ensure that the functions of the CSSF and AMSF(s) in a mobilization and transition-to-war environment are covered in doctrine and functions manuals.

13. Incorporate the ISC system within Army Regulations. Review and modify Army Regulations and other Department of The Army publications accordingly.

APPENDIX A

EXTRACT OF CONTRACT NO

MDA-903-84-C-0202

SECTION C: DESCRIPTION/SPECIFICATIONS

STATEMENT OF WORK

C-1. OBJECTIVE: To determine performance of those Army managed supply systems that are outside standard Army policies and procedures, isolate those instances where such systems do not significantly improve standard supply system performance, readiness, or convertibility to a wartime situation and provide recommendations as to their continuance, in whole or in part, or integration with standard systems.

C-2. BACKGROUND:

a. For a number of years, the thrust of the Department of Army Deputy Chief of Staff for Logistics (DA DCSLOG) has been to improve performance of the various logistics segments of the supply pipeline through application of computer technology and other logistics state-of-the-art advances. As the DA DCSLOG has overall logistics responsibility for the total Army, he is concerned that various "stovepipe" systems have been developed to address specific deficiencies in narrowly defined applications that are no longer justified based on original rationale. Where there is reasonable expectation that the standard Army systems will not degrade performance or readiness to any significant degree, the standard Army systems should be reinstated to ensure that the Total Army can transition to war with minimum turmoil.

b. There have been two recent in-house actions addressing "stovepipe" systems. The first was completed by USA Logistics Evaluation Agency (USALEA) in May 1982 which evaluated the Centralized Supply Support Facility (CSSF) at Fort Richie, MD. The study concluded that the CSSF was cost effective, had a lower order ship time than the standard system by 10 days, and recommended continuation of CSSF until standard systems could be made as responsive. The second "stovepipe" system addressed was the Electronic Material Readiness Agency (EMRA) support of two USA intelligence and Security Command (USAINSCOM) field stations. This "stovepipe" system was dissolved by adding the two field stations as customers to Defense Supply System Airline of Communication through an established Material Management Center (MMC).

C-3. TASKS This study will be developed in three phases:

a. Phase I. Through research of existing logistics policy and procedures, together with interviewc with top level Army logisticians and managers, identify unique "off line" logistics systems operating within the Army and prepare an analysis which depicts the projected length of time required to evaluate each system; what parts of those systems, if any, have the potential of operating more effectively and efficiently within the Standard Army Supply System; evaluate size and scope of each system; and rank list, in descending order of priority, which studies should be undertaken to provide the greatest payoff to the Army. Three representative operations that we believe will come under the "off-line" logistics system category are Facility Engineers, Medical (Class VIII) support and Army Communications Command's (ACC) supply support of ACC unique end items. These three examples can be used to prepare cost factors for analysis performed during Phase II and Phase III. It is assumed that travel will not be required during the course of this contract.

b. Phase II. The systems selected by the Office of the Deputy Chief of Staff for Logistics (DCSLOG) during this phase will be reviewed by laying out unique systems operational policy and procedures against current standard policy and procedures, determining the areas of similarity and differences and evaluating what is critical for customer support. Determine cost effectiveness "offline" systems to a wartime environment. This phase must result in fully justified recommendations in terms of operational effectiveness and efficiency as to which system, or part thereof, should be integrated in the standard Army system.

c. Optional Phase III. This phase will be implemented at the option of the government and will consist of any additional systems selected by the DCSLOG from a candidate list developed in Phase I that can be analyzed within three (3) months. Systems selected for this phase will be subjected to the same in-depth analysis as those systems studies under Phase II. The deliverables will also remain the same. The following three "off-line" logistics system category can be used to prepare cost factors: Facility engineers, Medical (Class VIII) Support, and Army Communications Commands (ACC).

C-4. GOVERNMENT FURNISHED SUPPORT

a. Documents, data, and access to Army activities and personnel will be made available on an "as required" basis.

b. Onsite office and filing space in the Pentagon.

c. Administrative support to include office supplies, typing (word processing) reproduction, aids, etc.

d. Printing or reproduction of study reports, including art work, graphics, and slides as needed.

C-5. REPORTS

a. The contractor shall submit the following reports in accordance with the delivery schedule set forth in Section F, Article 3.

0002AA - A Study Work Plan - A study work plan will be made available to the COR within seven calendar days of contract award. The study work plan will include a description and explanation of the study methodology and list of candidate measures of effectiveness.

0002AB - A Detailed Briefing - A detailed briefing of systems identified as "stovepipe" will be presented to the DCSLOG at the end of Phase I. The briefing will provide estimated time required to analyze each system, whether more than one system can be analyzed at a time, and which system should be and can be analyzed whithin the 90-day limitation of Phase II. The briefing will be a decision briefing at which time the DCSLOG will identify those systems to be studied during Phase II, based on Phase I recommendations.

0002AC - A Biweekly Statement - During Phase II a biweekly statement of progress will be in summary form of actions taken and study milestones met or slipped.

0002AD - Briefing - A briefing will be given to the DCSLOG no later than 45 days after initiation of Phase II. The briefing will provide sufficient depth for a determination to be made that the appropriate elements are being studied in each system. The DCSLOG will provide additional guidance, if required.

AD-A150 763 ANALYSIS OF OFF-LINE LOGISTICS SYSTEMS VOLUME 2 PHASE II STUDY REPORT(U) YOUNG (ARTHUR) AND CO WASHINGTON DC R L WEST ET AL. 24 SEP 84 MDA903-84-C-0202 2/2

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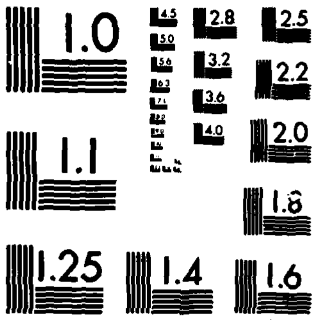

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0002AE - A Detailed Briefing - A detailed briefing of Phase II results will be presented to the DCSLOG within 90 calendar days after the study commences. The briefing will provide evaluation of each system studied in relation to discrete performance factors including, but not limited to, cost effectiveness, order ship time, and capability to be operated in a wartime environment. The briefing will recommend which unique systems should be continued and/or which systems, in whole or in part, should be integrated with Army standard systems. Recommended changes must be specific as to improvement expected and time required to effect changes.

0002AF - Draft Final Report - A draft final report will be submitted 15 days after the Phase II briefing. This report will be structured to support the conclusion of all tasks.

OPTION (Phase III)

0002AG - A Biweekly Statement - A biweekly statement of progress will be developed beginning 14 calendar days after notification of the Phase III commencement.

0002AH - A Detailed Briefing - A detailed briefing of Phase III results will be briefed to the DCSLOG 90 days after the Phase III option is exercised. This briefing will be structured identical to the Phase II final briefing.

0002AJ - <u>A Draft Final Report</u> - A draft final report will be submitted concurrent with the Phase III briefing. The Phase III report will replicate the Phase II final draft report for those systems studied during Phase III.

b. Reports delivered by the contractor in the performance of the contract shall be considered "Technical Data" as defined in the applicable Rights in Technical Data clause of the General Provisions.

c. Bulky reports shall be mailed by other than first-class mail unless the urgency of submission requires use of first-class mail. In this situation, one (1) copy shall be mailed first-class and the remaining copies forwarded by less than first-class.

d. The heading of all reports shall contain the following information:

CONTRACT NUMBER	NAME OF CONTRACTOR
CONTRACT EXPIRATION DATE	CONTRACTOR'S PROJECT
SHORT TITLE OF CONTRACT WORK	DIRECTOR
	PHONE NUMBER

C-6. DISCLAIMER STATEMENT

All reports resulting from this study will contain the following disclaimer statement on the cover of such reports:

"The views, opinions, and findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision, unless so designated by other official documentation".

APPENDIX D

LIST OF KEY PERSONS VISITED/CONTACTED

HQ DEPARTMENT OF THE ARMY

LTG David K. Doyle	Assisant Chief of Staff for Information Management
LTG Nathaniel R. Thompson, Jr.	The Inspector General
MG Vincent M. Russo	The Asst Deputy Chief of Staff for Logistics
Ms. Mary Ellen Harvey	Dep Dir, Sup & Maint Dir, ODCSLOG

USA ARMY MATERIEL COMMAND

GEN Richard H. Thompson	CG
BG(P) Robert D. Morgan	CG, USA Communications Electronics Command (CECOM)
COL Edward B. English	Dep Comptroller, CECOM
COL Charles Lindberg	CO, Satellite Communications Agency (SATCOMA)

Mr. William Tobias	Tech Dir, SATCOMA
Mr. J. R. Isom	Dir, Missile Logistics Center, USA MICOM

USA INFORMATION SYSTEMS COMMAND

LTG Clarence E. McKnight Jr.	CG (outgoing)
MG(P) Emmett Paige, Jr.	CG (incoming)
BG(P) Bruce R. Harris	CG, USA Communications System Agency (CSA)
BG John T. Myers	CG, 7th Signal Command
COL Charles Beckman	DCSLOG, 7th Signal Command
COL Howard H. Oakley	CO, ISC-TRADOC
COL Huntley E. Shelton, Jr.	Dep Cmdr, CSA
Mr. Feliciano Giordano	Tech Dir, CSA
Mr. Max Hitschman	Dir of Logistics, CSA
Mr. John Maliniak	Chief PARC, ISC
Dr. Kingsley E. Forry	A/DCSLOG, ISC

USA SIGNAL SCHOOL

MG Thurman D. Rodgers	CG
BG Billy M. Thomas	DCG
COL Ronald S. Savard	Director of Training
COL Peter A. Kind	Director, Combat Development

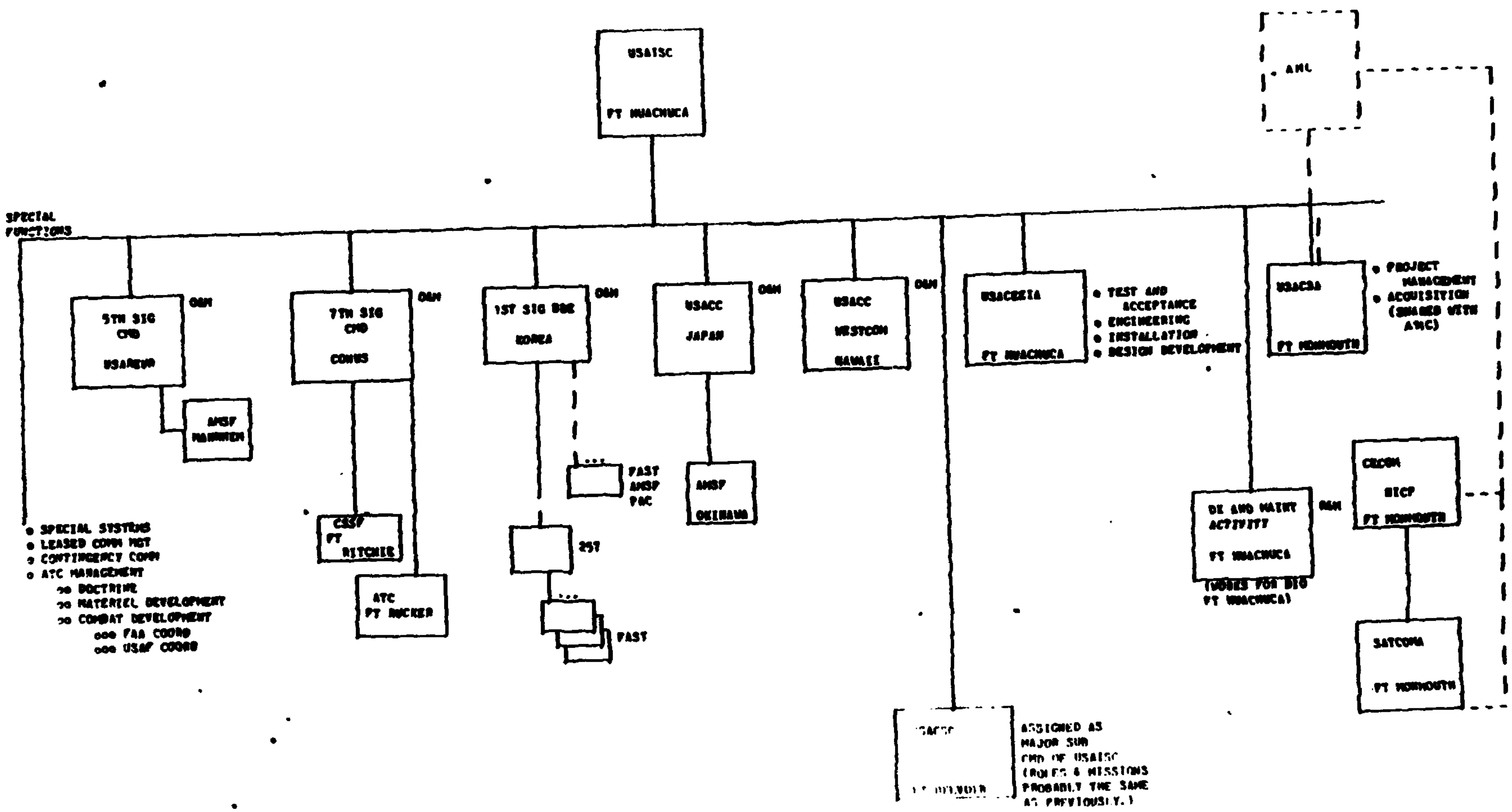
DEFENSE COMMUNICATIONS AGENCY

BG Joseph D. Schott	Director, Command and Control

EXHIBIT E

USAISC ORGANIZATION

PAGE	TITLE
E-2	USAISC Organization Chart. Referenced in the Main Report as Exhibit III-1.
E-3	AR 10-13 Organizations and Functions UNITED STATES ARMY COMMUNICATIONS COMMAND. 15 September 1980.



USATSC
FT HUACHUCA
AMC
SPECIAL FUNCTIONS
5TH SIG CMD
USAREUR
O&M
AMSF MANNHEIM
7TH SIG CMD
CONUS
O&M
CSSF FT RITCHIE
ATC FT RUCKER
1ST SIG BDE
KOREA
O&M
FAST AMSF PAC
257
FAST
USACC
JAPAN
O&M
AMSF OKINAWA
USACC
WESTCOM
HAWAII
O&M
USACEEIA
FT HUACHUCA
• TEST AND ACCEPTANCE
• ENGINEERING
• INSTALLATION
• DESIGN DEVELOPMENT
USACSA
FT MONMOUTH
• PROJECT MANAGEMENT
• ACQUISITION (SHARED WITH AMC)
DE AND MAINT ACTIVITY
FT HUACHUCA
O&M
(WORKS FOR DIG FT HUACHUCA)
CECOM
BICP
FT MONMOUTH
SATCOMA
FT MONMOUTH
ASSIGNED AS MAJOR SUB CMD OF USATSC (ROLES & MISSIONS PROBABLY THE SAME AS PREVIOUSLY.)
• SPECIAL SYSTEMS
• LEASED COMM MGT
• CONTINGENCY COMM
• ATC MANAGEMENT
•• DOCTRINE
•• MATERIEL DEVELOPMENT
•• COMBAT DEVELOPMENT
••• FAA COORD
••• USAF COORD

E-2

ARMY REGULATION
No. 10-13

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *15 September 1980*

ORGANIZATION AND FUNCTIONS

UNITED STATES ARMY COMMUNICATIONS COMMAND

Effective 15 October 1980

This revision updates the mission and functions of the US Army Communications Command.

Local supplementation of this regulation is prohibited, except upon approval of the Office of the Chief of Staff, Army (ATTN: DACS-DMA), Washington, DC 20310.

Interim changes to this regulation are not official unless they are authenticated by The Adjutant General. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

1. Purpose. This regulation prescribes the mission and principal functions of the Commanding General, United States Army Communications Command (CG, USACC). It also sets forth the relationships with other headquarters, agencies, and Government departments.

2. Applicability. This regulation applies to the Active Army, the Army National Guard, and the US Army Reserve.

3. Explanation of terms. *a.* Air traffic control (ATC). The control of air traffic required to prevent collisions between aircraft and between aircraft and obstructions; also, to expedite and maintain an orderly flow of air traffic. ATC involves the following:

(1) Giving flight information.

(2) Developing air traffic regulations, controls, and procedures.

(3) Planning, engineering, installing, and operating navigational aids and control tower equipment.

(4) Planning, engineering, and operating control towers and runway, taxiway, approach, and obstruction lighting devices.

b. Combat developments. See AR 310-25.

c. Other developmental activities. Doctrinal, organizational, and materiel systems requirements not included in the definition of combat developments.

d. Defense Communications System, Army (DCS, Army). The part of the Defense Communications System (DCS) assigned to the US Army.

e. Direct Army Communications System. Fixed and transportable Army communications, not a part of the DCS, and not organic to tactical units, essential for the functioning of echelons above corps (EAC), posts and bases, command control, and Army air traffic control.

f. Radio propagation technical services. Radio frequency systems performance analysis, electrical design of antennas, and radio propagation advice and predictions.

g. Assigned Army communications. All Army communications (except base communications and DCS, Army) assigned to USACC. This includes communications support to national and Army test ranges, proving grounds, and for nuclear and chemical surety programs.

h. Base communications. Communications services required to operate a military post, camp, base, installation, or station, including telephone service for Reserve facilities.

4. Mission. The mission of the CG, USACC is as follows:

*This regulation supersedes AR 10-13, 7 June 1974.

E-3.1

a. Provide Army's assigned part of the DCS.

b. Furnish all Army communications above corps level not assigned by HQDA to other commands and agencies.

c. Furnish base communications to oversea Army component and designated unified and specified commanders and to all CONUS installation commanders when not assigned by HQDA to other commands and agencies.

d. Provide all Army ATC services and systems.

e. Conduct combat development for DCS, Army; EAC level communications; and Army ATC systems and other development activities for base communications and assigned Army communications.

f. Serve as developing agency for overall design of communications systems, as directed by HQDA, which have sole application to DCS and other assigned Army communications systems. See table 6-1, AR 70-1.

g. Develop and issue operational and procedural guidelines, in coordination with CG, DARCOM, on security assistance activities involving the establishment of fixed and semifixed communications facilities.

h. Command organizations, installations, and activities as assigned by HQDA.

i. Develop Army plans for echelon above corps and base communications survivability.

5. Functions. The functions of the CG, USACC, unless HQDA modifies or assigns parts of them to other commanders, are as shown below.

a. Plan, engineer, install, operate, and maintain all assigned Army communications above corps level, Army's part of the DCS, base communications, and Army ATC facilities.

b. Establish policy and criteria for certifying Army ATC facilities and for reviewing and approving standard instrument approach and departure procedures. Perform flight checks and certification of Army ATC facilities and personnel. Determine and validate Army's requirement for flight information.

c. Represent DA with other Department of Defense, Government, and international agencies on the use of noncombat air space; air traffic regulation, control, and procedures; and flight information.

d. Participate in materiel acquisition. Conduct development, user, and retail level logistics support evaluation tests for systems applicable to USACC's mission.

e. Provide transmission facilities and radio distribution systems in support of education, information, and entertainment radio and television. This does not include broadcasting facilities and television receivers.

f. Centrally manage equipment used in DCS, Army; Army ATC; and other USACC communications systems in accordance with AR 710-2.

g. Furnish communications support to unified and specified commanders during contingency and emergency operations and to State and Federal agencies during civil disturbance or natural disaster operations.

h. Provide communications interface between the DCS and the senior US Army headquarters in a theater.

i. Manage the acquisition and installation of telecommunications systems in oversea areas in support of the Military Assistance Program, Agency for International Development, and foreign governments as assigned. Perform security assistance activities as prescribed by AR 12-1.

j. Provide and manage the Army's worldwide lease telecommunications services and facilities.

k. Manage the Army Telecommunications Requirements Program (TELERS).

l. Provide new equipment training for equipment and systems used by USACC. Develop qualitative and quantitative personnel requirements according to AR 611-1. Provide training on communications-electronics equipment used solely by USACC, for which there is no DA training base, when agreed to by the CG, TRADOC.

m. Centrally develop, manage, and maintain automated telecommunications systems software for base communications and other systems, as assigned.

n. Direct and manage the operation of the Army Military Affiliate Radio System (MARS).

o. Develop the Army Telecommunications Ten-Year Plan.

p. Provide radio propagation technical services to the military services and other Government agencies. Perform radio field spectrum measurements. Conduct radio frequency hazard and radio propagation path surveys.

q. Serve as functional chief of the Army Civilian Career Program for Communications.

r. Program, allocate, and supervise resources for achieving USACC's mission.

s. Develop Army policy, systems definition, and

E-3.2

procedures for Army-wide communications systems within the scope of Army regulations and DOD, JCS, and DCS policy for the operation of DCS, Army and Direct Army Communications systems.

t. Manage call signs and frequency assignments for the Army.

u. Provide Army area frequency coordinators in the CONUS and DOD area frequency coordinators for the White Sands Missile Range and the State of Arizona.

v. Represent the Army on the following committees and panels:

(1) Frequency Assignment Subcommittee.

(2) International Notification Group of the Interdepartment Radio Advisory Committee (IRAC).

(3) Call Signs Panel, Communications Publication Panel, Frequency Panel, and Methods and Procedures Panel of the US Military Communications-Electronics Board (USMCEB).

w. Manage the Army Communications-Electronics Operating Instructions (CEOI) Program.

x. Provide life cycle communications-electronics planning assistance and support to the US Army Computer Systems Command and DA functional proponents of ADP systems.

y. Implement and manage Army portion of the DOD electromagnetic compatibility program in accordance with AR 5-12.

z. Operate a dedicated retail logistic support system for all communication-electronics systems and equipment organic to USACC. This includes operation of area maintenance and supply facilities.

aa. Provide retail Communications Security (COMSEC) logistics support to oversea Army component commands, unified commands, and allied forces where appropriate.

ab. Develop, administer, and maintain the Data Requirements Transfer System (DARTS).

6. Relationships. *a.* The CG, USACC is under the supervision of the Chief of Staff, United States Army (CSA). Directives, authority, policy, planning and programing guidance, approved programs, and resource allocations are issued to the CG, USACC by the CSA.

b. The USACC and other major Army commands (MACOMs) are coordinate elements of the Department of the Army. The CG, USACC is authorized to communicate directly with other Army headquarters and agencies on matters of mutual interest.

c. In CONUS and oversea areas, a memorandum of understanding will be transacted between USACC and the MACOM or component command to define support and logistical relationships. Local level agreements may be made when required. These agreements should clearly define the necessary installation support relationship between tenant and host which will permit both to perform their respective missions at acceptable levels of performance.

d. The CG, USACC is the Army point of contact for dealing with the Director, Defense Communications Agency on operational communications and related matters.

e. The CG, USACC, will command all assigned communications and ATC organizations supporting MACOMs. Operational control will be exercised by the CONUS-based major Army commander or the oversea Army Component commander. The senior USACC commander serves concurrently as the Deputy, Assistant Chief of Staff, or Director for Communications-Electronics on the supported commander's staff. Dual status may apply below the supported command headquarters level by mutual agreement of the commanders. At all CONUS installations, the USACC commander or director will be a principal member on the installation commander's staff for communications-electronics.

f. CG, TRADOC will assign tasks and furnish guidance for USACC combat development activities. USACC will provide the completed combat development products to TRADOC for integration into overall combat developments.

g. For other development activities, CG, USACC will report directly to HQDA. USACC will coordinate all other development products affecting combat developments and supporting aining developments with TRADOC.

h. CG, USACC will coordinate with the CG, DARCOM those matters pertaining to the acquisition of communications systems for which USACC has been designated as materiel developer.

i. CG, USACC will coordinate with CG, USACE, those matters pertaining to the acquisition of communications systems for which USACC is responsible in support of the Military Construction Program.

j. USACC and its installations and activities are dependent on the commands listed below for the support indicated, unless furnished by other Services or otherwise approved by HQDA.

(1) US Army Health Services Command for au-

E-3.3

thorized health services in CONUS.

(2) US Army Criminal Investigation Command for criminal investigations and crime surveys.

(3) US Army Intelligence and Security Command for counterintelligence, electronic warfare, and cryptologic and signal security.

The proponent agency of this regulation is the Office of the Chief of Staff, US Army. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications) direct to HQDA(DACS-DMA), Wash 20310.

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:
J. C. PENNINGTON
Major General, United States Army
The Adjutant General

DISTRIBUTION:
Active Army: To be distributed in accordance with DA Form 12-9A, requirements for Organizations and Functions - D.

*U.S. GOVERNMENT PRINTING OFFICE : 1982 0-361-663/130

E-3.4

APPENDIX I

ACRONYMS

A

ACC - US Army Communications Command
ADP - Automatic Data Processing
ALMC - US Army Logistics Management Center
ALOC - Air Line of Communication
AMC - Army Materiel Command
AMDF - Army Master Data File
AMP - Army Materiel Plan
AMSA - Army Materiel Systems Analysis Activity
AMSF - Area Maintenance Supply Facility
ASL - Authorized Stockage List
ATC - Air Traffic Control
AUTODIN - Automatic Digital Network
AUTOSEVOCOM Automatic Secure Voice Communication
AUTOVON - Automatic Voice Network

B

BDM - Braddock, Dunn and McDonald, Inc
BOIP - Basis of Issue Plan
BOM - Bill of materiels

C

CBS-X	- Continuing Balance System-Expanded
CBRS	- Concept Based Requirements System
CCSS	- Commodity Command Standard System
CDDB	- Central Demand Data Bank
CECOM	- US Army Communications and Electronic Command
CEEIA	- Communication Electronic Engineering Installation Agency
CG	- Commanding General
COMSEC	- Communications Security
COSCOM	- Corps Support Command
CPP	- Central Processing Point
CSA	- Communications Systems Agency
CSSF	- Central Supply Support Facility
C-E	- Communications-Electronics

D

DAAS	- Defense Automatic Addressing System
DARCOM	- USA Materiel Development and Readiness Command
DCA	- Defense Communications Agency
DCG	- Deputy Commanding General
DCS	- Defense Communication System
DESC	- Defense Electronics Supply Center
DESCOM	- US Army Depot Systems Command
DIO	- Director of Industrial Operations
DLA	- Defense Logistics Agency
DLOGS	- Division Logistics System

DLSC - Defense Logistics Services Center
DMMC - Division Materiel Management Center
DOD - Department of Defense
DODAAC - DOD Activity Address Code
DSCS - Defense Satellite Communication System
DSS - Direct Support System
DSU - Direct Support Unit
DS4 - Direct Support Unit Standard Supply System
DX - Direct Exchange

E

EAC - Echelons Above Corps
ERC - Equipment Readiness Code
ERPSL - Essential Repair Parts Stockage List

F

FAS - Force Accounting System

G

GSU - General Support Unit

I

ILS - Integrated Logistics Support
IM - Item Manager
INSCOM - US Army Intelligence & Security Command

ISC	-	US Army Information Systems Command
ISO	-	Installation Supply Office

L

LCA	-	Logistics Control Activity
LEA	-	US Army Logistics Evaluation Agency
LIF	-	Logistics Intelligence File
LIN	-	Line Item Number
LOGC	-	US Army Logistics Center
LOGMIS	-	Logistics Management Information System
LSA	-	Logistics Support Assessment
LOGNET	-	Logistics Data Network
LOGSACS	-	Logistics Structure and Composition System
LP	-	Local Procurement

M

MAA	-	Mission Area Analysis
MCN	-	Management Control Number
MFP	-	Materiel Fielding Plan
MICOM	-	US Army Missile Command
MILSTAMP	-	Military Standard Transportation and Movement Procedures
MILSTRIP	-	Military Standard Requisition and Issue Procedures
MMC	-	Material Management Center
MOC	-	Management of Change
MPN	-	Manufacturer's Part Number
MRD	-	Material Release Denial
MRO	-	Materiel Release Order

MRSA	-	Material Readiness Support Activity
MRC	-	Material Readiness Command
MTOE	-	Modified Table of Organization & Equipment

N

NDI	-	Nondevelopment Item
NET	-	New Equipment Training
NETP	-	New Equipment Training Plan
NICP	-	National Inventory Control Point
NOT	-	New Organization Team
NSN	-	National Stock Number

O

OJT	-	On the Job Training
OST	-	Order Ship Time

P

PARC	-	Principal Assistant Responsible for Contracting
PB	-	Property Book
PCB	-	Printed Circuit Board
PD	-	Priority Designator
PERSACS	-	Personnel Structure and Composition System
PG	-	Property Group
PLL	-	Prescribed Load List
PM	-	Project Manager
P/N	-	Part Number

PP	-	Parcel Post
P3I	-	Preplanned Product Improvement

Q

QQPRI	-	Qualitative, Quantitative Personnel Requirements Information

R

RICC	-	Reportable Item Control Code
RIMSTOP	-	Retail Inventory Management Stockage Policy

S

SACS	-	Structure and Composition System
SAILS	-	Standard Army Intermediate Level Supply System
SALS	-	Standard Army Logistics System
SATCOMA	-	Satellite Communications Agency
SLAC	-	Support List Allowance Card
SSA	-	Supply Support Activity
SSSC	-	Self Service Supply Center
STAMMIS	-	Standard Army Multi-Command Management Information System
STANFINS	-	Standard Army Financial System

T

TAADS	-	The Army Authorization Documentation System
TAEDP	-	Total Army Equipment Distribution Plan
TAMMC	-	Theater Army Materiel Management Center
TDA	-	Table of Distribution Authorization
TELER	-	Telecommunications Requirements
TMDE	-	Test, Measurement and Diagnostic Equipment
TMMC	-	Theater Materiel Management Center
TOE	-	Table of Organization and Equipment
TRADOC	-	US Army Training and Doctrine Command

U

UMMIPS	-	Uniform Material Movement and Issue Priority System
UNISTAR	-	A code word pertaining to materiel being fielded by means of depot staging
UPS	-	United Parcel Service
USAISC	-	US Army Information Systems Command
USAREUR	-	US Army Europe

V

VIABLE	-	Vertical Installation Automated Baseline
VTAADS	-	Vertical the Army Authorization Documentation System

END

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