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**Security Assistance Data Element Catalog (SADEC)**

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FINAL REPORT
LSO PROJECT 813

SECURITY ASSISTANCE
DATA ELEMENT CATALOG (SADEC)

SEPTEMBER 1980

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SECURITY ASSISTANCE
DATA ELEMENT CATALOG (SADEC)

LOGISTICS STUDIES OFFICE
PROJECT NUMBER 813

FINAL REPORT
SEPTEMBER 1980

PETER J. HIGGINS

LOGISTICS STUDIES OFFICE
US ARMY LOGISTICS MANAGEMENT CENTER
FORT LEE, VIRGINIA 23801
ABSTRACT

This report describes the work to compile a single catalog of security assistance-related data elements from several systems. Regulatory guidance is discussed as well as problems discovered in the abbreviations and definitions of some data elements. The major recommendations are to designate the US Army Security Assistance Center as custodian of security assistance data elements and to require system developers to adhere to the documentation standards in DOD Standard 7935.1-S.
ACKNOWLEDGEMENTS

This study was performed under the direction of Ms. Virginia W. Perry (January through February 1980) and Mr. J. Allen Hill (March through September 1980), Acting Directors of the Logistics Studies Office (LSO), U. S. Army Logistics Management Center, Fort Lee, Virginia. Mr. D. R. W. Murtomaki (DRSAC-MSS) was the sponsor's representative. Appreciation is expressed to Mrs. Doris Johnson and Mr. Jay Potter of the U. S. Army Security Assistance Command-New Cumberland Army Depot for their assistance in assembling the basic information for CISIL and HQMIS, and to Mr. Wilford H. Brisendine of LSO for developing the computer programs used in this study.
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EXECUTIVE SUMMARY

1. **Purpose.** The purpose of this study is to catalog all security assistance-related data elements to provide analysts and managers information concerning data elements used to manage security assistance.

2. **Background.** A major problem facing security assistance management is the lack of data or the inability to locate data necessary to make management decisions. The US Army Security Assistance Center (USASAC) is responsible for operational management and control of the US Army Security Assistance Program. As a result, USASAC is frequently required to provide rapid and accurate responses to inquiries of customer countries and higher authority within the US Government.

3. **Objectives.** The objectives of the study are:
   a. To provide a "first step" in the documentation of included security assistance systems by providing selected essential information on each data element to the respective systems.
   b. To consolidate security assistance-related data elements into a single reference to aid the managerial process.
   c. To construct a data element reference and to facilitate retrieval of the information recorded therein.
   d. To report findings and provide recommended instruction for continual updating of the Security Assistance Data Element Catalog (SADEC).

4. **Findings and Conclusions.**
   a. **Findings.**
      (1) No Data Element Dictionary (DED) or glossary of terms exists for some current Automatic Data Processing (ADP) systems.
Some commonly used terms have different names, abbreviations, and definitions assigned by different levels in the Department of Defense (DOD) hierarchy.

No single activity is currently responsible for maintaining security assistance data element integrity.

### Conclusions

1. Duplication of data element names, abbreviations, and definitions exists within and between information systems.
2. Maintenance of "Data Element Dictionaries" and/or glossaries needs increased attention by system proponents.

### Recommendations

1. The US Army Security Assistance Center (USASAC) should be designated the US Army Security Assistance Data Element Custodian.
2. The Data Element Custodian should maintain, update, and standardize data elements used in the Security Assistance Program.
3. The Security Assistance Data Element Custodian should broaden the scope of the Security Assistance Data Element Catalog to include all data elements used to manage security assistance.
4. System developers should adhere to DOD Standard 7935.1-S, Automated Data Systems Documentation Standards, and be held accountable for correct system implementation.
5. Require system proponents to institute programs to standardize codes and definitions consistent with guidance from the highest level in the DOD hierarchy.
1. **Purpose.** The purpose of this study is to catalog all security assistance-related data elements of the systems incorporated in this effort into one reference giving analysts and managers essential information concerning each data element listed. Specifically, the study effort was directed toward the design and construction of an abbreviated Data Element Dictionary (DED) and to provide instructions for updating the catalog.

2. **Background.** Prior to 1973, security assistance played a minor role in the Army supply operation. Due to its size and the relatively simple regulatory procedures then in effect, it was not difficult to manage. Security assistance requirements were rolled up with those of the Army into one consolidated requirement for each item of materiel/services. Since 1973, security assistance has become a major factor in Army procurement programs. Security assistance organizations are now separate entities; and in Fiscal Year (FY) 1979, the value of security assistance procurement exceeded 14 percent of the total US Army procurement. The actual value of new DD Form 1513 FY 79 security assistance agreements was over $13 billion according to the Congressional Presentation, Security Assistance Program, FY 1981. Because of the dollar value and political implications of security assistance, more intensive management capability is now required. A major problem currently facing security assistance management is the lack of data or the inability to locate data necessary to make management decisions. The US Army Security Assistance Center (USASAC) is responsible for operational management and control of the US Army Security Assistance Program.
As a result, USASAC is frequently required to provide rapid and accurate responses to inquiries of customer countries and higher authority within the US Government.

3. **Problem.**

   a. It is often difficult and time consuming to trace the source of security assistance data given the numerous systems employed in its management. This task is made even more onerous by the fact that no list of data elements was produced either before or after some systems were developed.

   b. Once the source of data is known, it must be considered in the light of the definition assigned it by the system proponent. Without such data element information available to the manager/analyst/researcher, varied meanings may be assigned to correspond with the needs of the user. Standardization of data element names, abbreviations, codes, and definitions would reduce this problem when multiple systems or people are involved.

4. **Objectives.** The objectives of the study are:

   a. To provide a "first step" in the documentation of included security assistance systems by providing selected essential information on each data element of the respective systems as submitted to the study agency by the system proponents.

   b. To consolidate security assistance-related data elements into a single reference to aid the managerial process.

   c. To construct a data element reference and to facilitate retrieval of the information recorded therein.

   d. To report findings and provide recommended instructions for continual updating of the Security Assistance Data Element Catalog (SADEC).
5. **Limits and Scope.**
   
a. The study was limited to record specific information on data elements in each of the sponsor-selected systems listed below:
   
   - Commodity Command Standard System (CCSS).
   - Centralized Integrated System for International Logistics (CISIL).
   - Army Customer Order Control System (ACOCS).
   - Army Procurement and Reporting System (APARS).
   - DARCOM Headquarters Management Information System (HQ MIS).
   - Defense Integrated Financial System (DIFS).
   - Program 10 - Support to Other Nations.
   
b. Although ten systems were originally to be incorporated in this study (three from DSAA), data was received from only three systems. The study agency was not assured of receiving data from the nonresponding system proponents within the time allotted to perform this study; therefore, the study was terminated with the recommendation that as further systems respond the catalog would be updated to include them.
   
c. The three systems responding were:
   
   - Commodity Command Standard System.
   - Centralized Integrated System for International Logistics.
   - DARCOM Headquarters Management Information System.
   
d. Proponents of the other systems either failed to respond to the data request or the study sponsor removed the system from the study effort consideration. Appendix H details reasons for the failure to obtain data from these systems.
   
e. The specific information requested by the study sponsor for each data element included:
   
   (1) Data element name.
   
   (2) Data element abbreviation.
   
   (3) Proponent office symbol.
4. Standardization level: Department of Defense (DOD), Department of the Army (DA), US Army Materiel Development and Readiness Command (DARCOM), other or blank if not standardized.

5. Standard Data Element (SDE), Interim Data Element (IDE), or blank if neither.

6. Effective date of standardization.

7. Definition as defined by the system proponent.


The computer system abbreviation or acronym was added by the study agency to aid in the cross-checking of similar data element names, abbreviations, and definitions between the different systems.

6. Methodology. The methodology employed in the course of the study included:
   a. Bibliographic/regulatory search and literature review.
   b. Personal and telephonic interviews.
   c. Data collection visit to USASAC.
   d. Formal data calls to agencies responsible for the data systems.

7. Computer Programs.
   a. Computer programs developed to print the first two sections of the SADEC are listed in Appendix F with excerpts of their products. The last two sections of the SADEC were constructed using a combination of programs and utility sort programs on the US Army Logistics Management Center's Hewlett-Packard 3000 computer.
   b. Recommended updating procedures are discussed in Appendix G.
   c. Annex A to this report is a hardcopy listing of the SADEC, and Annex B (provided only to the study sponsor) is a magnetic tape containing the catalog, programs, and the files necessary to generate the SADEC.
8. System Proponents and Relationships.

a. The system proponent for CCSS, the US Army Automated Logistics Management System Activity (ALMSA), provided a magnetic tape of only those data elements used in International Logistics (IL) (as requested) based on the DARCOM Systems Management and Control Structure Code. This tape, edited to comply with the needs of this study, became the CCSS file.

b. USASAC is the proponent for CISIL. CISIL was developed by using many data elements from CCSS; however, no DED existed for CISIL which necessitated a manual effort by the study agency and USASAC.

c. USASAC also is responsible for the security assistance portion of the HQ MIS. The Security Assistance part of HQ MIS was developed basically as a CISIL spin-off using some of the CISIL files and data elements. Since no DED was available for HQ MIS, manual efforts were again necessary to compile one.

d. Data element information used in this study is considered to be current as of the dates listed below:

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<th>System</th>
<th>Current as of</th>
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<tr>
<td>CCSS</td>
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<tr>
<td>CISIL</td>
<td>12 Jun 80</td>
</tr>
<tr>
<td>HQ MIS</td>
<td>15 Aug 80</td>
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</table>

9. Catalog Format.

a. The process of developing a catalog of security assistance data elements can be a simple job for any number of systems if the raw data is provided in a standard format on magnetic tape. The process used in developing this catalog is straightforward and permits catalog expansion. The design and construction does not limit the number of systems or the number of data elements which can be cataloged. With minor programming, the data format can be rearranged and additional data fields can be added for each data element.
b. Computer techniques were used for speed and accuracy of compilation. A separate file was set up for each system to store the data elements (and data element information). This permitted all necessary editing to be done once and provided a file for each system in the catalog.

c. The three files are named with the system abbreviation for the data they contain. For example, the file for CISIL was named CISIL (CCSS and HQ MIS are the names of the other two files).

d. The data call (Appendix C), sent out by the study sponsor, contains the file format used in this study. A new system proponent responding to this data call with a magnetic tape can quickly have its system data elements added to the catalog with minor modification to the simple programs used in this effort.

e. The Security Assistance Data Element Catalog (SADEC) is divided into four sections:

(1) **Section A:** Summary of Information Collected for Each Data Element, Listed Alphabetically by Data Element Title. (Program Title: SADECA)

(2) **Section B:** Alphabetic List of Data Element Names with System Abbreviation. (Program Title: SADECB)

(3) **Section C:** Alphabetic Listing of Data Element Abbreviations with Data Element Name and System Abbreviation.

(4) **Section D:** Alphabetic Listing of Data Element Names in DARCOM Systems Management and Control Structure Code Sequence.

f. Each section requires a separate computer program to extract the correct information from the SADEC master file and print it on the line printer. The programs are listed in Appendix F with examples of their products.
g. Each line of the individual catalog entry is coded with a card number located in card columns 79-80 of the SADEC master file. The number 1 card (1) contains the data element title, and the number 2 card (2) contains the data element abbreviation. The system abbreviation, proponent office symbol, and standardization information is located on the 3 card (3). The data element definition begins on the 4 card (4) and continues in sequence on the remaining cards until the entire definition is loaded. The last entry is the DARCOM Systems Management and Control Structure code on the 99 card (99).

(1) Modifications to this format will permit the inclusion of more data files for each entry.

(2) Further examination of the data call in Appendix C will reveal the actual card columns in which each data field is entered. Attention to proper columnar placement is necessary to insure each field is correctly printed.

10. Security Assistance Data Element Catalog (SADEC) Maintenance.

a. The SADEC will enable the Security Assistance Data Element Custodian to correct duplications if such authority is given. Section A lists the total information collected for each data element in the format described in the data call. Section B displays in alphabetic sequence the data element names and the system(s) in which it is found. Duplicated names are listed adjacent to each other; and by checking Section A of the catalog, the custodian can determine if the entire entries are duplicated or not. Likewise, Section C lists duplicate data element abbreviations in sequence with their respective system abbrevia-
tions. Section D lists the data elements with common DARCOM Systems Management
and Control codes. Analysis of Sections B, C, and D facilitate cross-checking of the lists of data elements and can be useful for determining duplications.

b. Correcting errors, omissions, and duplications is beneficial to data elements currently in use. This catalog may also enable the custodian to prevent the addition of data elements when it would duplicate data elements already in existence. This second benefit will require a person or staff knowledgeable in the specific subject area with the authority to direct individual system proponents to rename a data element or use another in lieu of the one submitted. This will require direction from a higher level.
SECTION II - OBSERVATIONS BEYOND THE SCOPE OF THE STUDY

1. Regulatory Discussion.

   a. Standardization of data elements cannot properly be described as a study function; consequently, the tasking document placed no requirement to standardize data elements on the Logistics Studies Office (LSO). The compilation of this catalog can be considered as a necessary first step in that direction.

      (1) Department of Defense Standard 7935.1-S, Automated Data Systems Documentation Standards, 13 September 1977, describes the Data Requirements Document in Part 2, subparagraph 2.4.2, Item B, and the term "data element" used "...refers to a data element or to its use in a data system..." It further states that:

          The names and associated codes of many data elements have been standardized in order to facilitate data exchange and commonality of data structures. These standard data elements and data element codes shall be used whenever applicable in all data base files.

      (2) DOD Standard 7935.1-S, Part 2, subparagraph 2.4.2, Item c:

          ...When a data processing system is designed that uses standard data elements...any existing data element libraries should be updated to reflect new uses.

      (3) Within these two quoted passages are given the basic tenets of standardization of data elements. One, standard data elements will be used when applicable to all data base files; and two, when you use a standard data element, the existing data element libraries must be updated to reflect the new use to which that data element is put. In this way, data base libraries are updated and unneeded data elements are not developed since existing data elements are employed.

      (4) Standardization of data elements is properly within the scope of work for any system developer/proponent. The following excerpts from selected
regulations provide the framework within which use of data elements is governed. The regulations quoted are not intended as all inclusive, but merely to point out that regulatory guidance pertaining to data elements already exists and the shortcoming is in compliance.

b. Department of Defense Directive (DODD) 5105.22, Defense Logistics Agency (DLA), 8 June 1978, includes a cataloging function to:

- Develop and maintain the central, single, official record of Federal Catalog data for all items of supply in the Federal Catalog system, including all identification and classification data and those elements of management data appropriately contained therein. (E.2.c.)

c. The Defense Logistics Services Center (DLSC), a subordinate of the Defense Logistics Agency, maintains the Defense Integrated Data System (DIDS) and publishes the standard codes and definitions of data elements in DOD 4100.39-D (Defense Integrated Data System Data Element Dictionary).

d. Department of Defense Instruction (DODI) 5000.12, Data Elements and Data Codes Standardization Procedures, 27 April 1965, contains definitions of terms useful to this study. These terms are entered at Appendix D to this study.

1. Selected policies outlined in DODI 5000.12, paragraph IV, are:

- Data Elements will be identified, defined, classified and coded in a uniform manner. Those Data Elements and related features which can be applied to more than one data system or organization will be published as DoD standards to be utilized to the greatest practicable extent.

- Data Elements may be developed, defined, coded and applied on an interim basis when standard Data Elements do not exist or do not meet data system requirements. Interim Data Elements will be cataloged and referred to the Assistant Secretary of Defense (Comptroller) for determination as to their acceptability as standard Data Elements.
E. Data Elements and related features used by DoD components in existing data systems and those developed by industry and other Government agencies will be considered for standardization where feasible.

(2) DODI 5000.12 also lists certain standardization criteria for data elements under paragraph A.2 of the inclosure titled "Explanation and Criteria":

a. Each Data Element will be given a unique name.

b. A Data Element may be given a unique mnemonic abbreviation.

c. Each Data Element will be given a precise and succinct definition. It will have a meaning significantly different from any other Data Element. The definition will have only one acceptable interpretation. The definition will be thoroughly developed and tested to minimize ambiguity. The definition should first basically state "what the Data Element is" and then, if needed, further amplify to clarify understanding. Existing definitions in current publications should be used to the extent that they meet the above criteria.

e. One of the principal objectives of the Army Management Information Systems (AMIS), as stated in AR 18-1, Chapter 1, paragraph 1-2g, is to: "Seek AMIS economies by--(1) Disciplining systems growth through standardization of functional applications and reduction of unique systems.", and "(5) Reducing, consolidating, and/or integrating, where applicable, duplicative reports, files, and data bases."

f. The Army Information Processing Standards (AIPS) program, established by AR 18-1, paragraph 4-1, "...complements the DOD Information Processing Standards for Computers IPSC Program (DODD 4120.3) and implements the DOD Data Element and Codes Standardization Program (DODD 5000.11)." The AIPS program standardization objectives regarding data, stated in AR 18-1, paragraph 4-2, include:

a. Facilitate interchange and compatibility of data, computer components, and devices among Department of the Army information and data systems and those of other Government and non-Government agencies.
d. Reduce data processing costs by using standard data codes in lieu of the full description of the data items. Thus, standardization of data elements should be advanced to aid implementation of the objectives listed in AR 18-1.

g. Department of the Army (DA) policies in support of the AIPS program objectives are listed in AR 18-1, paragraph 4-3. Excerpts from those AIPS policies related to data elements and codes are:

4-3b. Data elements and codes that can be used in more than one information or data system will be considered for standardization.

c. Data elements and codes that are currently in use will, where feasible, be adopted as Army standards.

d. A data use identifier name, abbreviation, and definition, when added to a standard data element, become part of the standard.

e. Standard data elements emanating from the Federal Government, industry, American National Standards Institute, or other standards organization will not be implemented within Department of the Army without prior approval from USACSSEA (US Army Computer Systems Support and Evaluation Agency).

f. Applicable standard data elements and codes will be used when providing or interchanging data in automated form between or among two or more systems, organizations, DOD components, or Federal agencies. An activity which implemented standard data elements and codes and used them in a data transfer or interchange will bear no part of the costs required for code translation or conversion necessary to effect the data transfer or interchange. All such costs will be borne solely by those parties to the data transfer or interchange who did not implement the applicable standard data elements and codes.

h. The AIPS program is managed by the US Army Computer Systems Support and Evaluation Agency under provisions in AR 10-8, Organization and Functions, US Army Computer Systems Selection and Acquisition Agency, and is tasked with program responsibilities in AR 18-1 that include:
4-4b(2) Establishing procedures and criteria for identifying, classifying, developing, documenting, and coordinating proposed interim and standard data elements and codes, and applying and maintaining approved standards.

********

(4) Providing -

********

(b) The staff point of contact with OASD(C), the DOD components, and other Governmental agencies and non-Governmental organizations on data element standardization and related projects.

(5) Designating the APOC (Army Point of Contact) ... for data element standardization assignments.

********

(10) Insuring coordination of proposed DOD standard data elements, and recommending DMIS approval of the proposed Army response to the DOD assigned responsible agency.

********

(13) Serving as the HQDA proponent for the DA Data Element Management System (DADEMS) for Interim and Standard Data Elements and Codes.

4-4c. Army staff agencies and major Army commands are responsible for...

********

(3) Developing and recommending data elements and codes to HQDA for approval as Army standards.

4-4d. Responsibilities of the Army point of contact for a DOD data element standardization project are as follows:

(1) When a DOD component other than the Army is ARA (Assigned Responsible Agency) for a DOD project, APOC (Army Point of Contact) responsibilities include, but are not limited to--

(a) Participating with the ARA in the development of proposed DOD standard data elements.
(b) Army wide coordination of the proposals.

i. The responsibility of the US Army Materiel Development and Readiness Command activity commanders in regard to data elements is specified in DARCOM-R 18-17, Chapter 2:


   a. The commander of each DARCOM activity will:

   ** ** ** **

(6) Assure that all data elements that will be used on a recurring basis are entered in the Data Element Dictionary in accordance with volume 4, DARCOM-R 18-5.

This statement infers that the DARCOM Data Element Dictionary (DED) will be checked first to find out if a current data element can be used instead of developing a new data element, and it also places a heavy responsibility on the US Army Automated Logistics Management Activity (ALMSA). As manager of the DARCOM DED, ALMSA must insure that all data elements incorporated are reviewed and all necessary system maintenance (amend, add, and delete) is performed. There is no incentive to use the DED if it is not accurate.

j. By rigorous discipline in the application and enforcement of the existing policies, duplicated costs in time, money, and inconvenience can be avoided and full data interchange between systems can move towards reality. The primary thought for system designers should be to develop the best system for the situation. Since time constraints are always a fact of life, the use of data elements already in existence (whenever possible) appears to offer substantial savings in development time. System integration offers greater savings than system uniqueness. Use of standardized data elements and the coding associated therewith should cut development costs, offer system compatibility, and stem the proliferation of data element redundancy.
k. When a desired data element does not already exist, one should be developed having the necessary characteristics without any features preventing its use by other systems.

(1) In all cases, steps should be taken at the earliest possible time to standardize data elements. This should be viewed by all concerned as an investment with the resulting savings as the profit.

(2) The situation with which we are faced (numerous systems, most with their own brand of uniqueness be it data element name, abbreviation, coding, editing criteria, etc.) is the price we are now forced to pay for the lack of adherence to the policies set down in the regulations previously cited.

1. Effective corrective action taken now will be difficult, expensive, and time consuming, but the task, if started now, can be accomplished more easily (and economically) than by waiting until additional nonstandard, unique, and incompatible systems and data elements are adopted.

m. The task within each service requires direction and support from the highest level and must be coordinated by DOD to assure standardization among the services. The services must work together since this problem requires concerted effort in its solution.

2. Data Element Discussion.

a. As previously stated, the study requirement was to develop a catalog of security assistance-related data elements and information gathered from the respective system proponents. While the sponsor placed no requirement to standardize data elements or to examine the information gathered (save for obvious errors) certain inconsistencies were discovered which need correction by system proponents.
b. The reader is forewarned that the following examples are not intended as a complete listing of the types of errors to be found in this catalog or the systems in general. Rather, the examples point out the need for a continuing program of system maintenance and that additional work is needed before a common set of data elements can be used by separate data systems.

c. Several types of problems in the Centralized Integrated System for International Logistics (CISIL) are offered as evidence that additional work is needed on CISIL data elements:

   (1) **Multiple Abbreviations.** These examples, found in CISIL, consist of data elements with identical names but different abbreviations. The first example is "ACCESSORIAL CHARGE CODE." This data element (as used in the Materiel Request History and Status file) is listed twice, each time with a different abbreviation. They are:

   - ACCESS-CD
   - ACCSL-CHG-CD

   Interestingly enough, the same definition is used in both instances but the proponent office symbols and the DARCOM Systems Management and Control Structure Codes are different.

   (a) It is easy to see how confusion can result with this type of problem. The next level of investigation, beyond the scope of this study, would be to determine whether the coding elements used are the same in both instances. The question "Is this one data element or two?" arises; and in either case, we are faced with a mixture of information.

   (b) It is difficult to understand how a situation of multiple abbreviations such as this could develop. This situation occurred in one file, so comparison of data elements could easily be conducted by one person.
(c) Interviews with several personnel at the US Army Security Assistance Center - New Cumberland Army Depot (USASAC-NCAD), proponent of CISIL, indicated the cause as being a short cut in the Common Business Oriented Language (COBOL) programming process. They explained that it is easier to set up a separate abbreviation than to write a more lengthy and detailed program to cover the situation. In this case, expediency won out over the more correct but time-consuming approach.

(2) Multiple Names. The second example is of three data element names with the same abbreviation, definition, proponent office symbol, and DARCOM Systems Management and Control Structure code, and all three are found in the same CISIL file (Transportation Master). The abbreviation is "DT-EN," and the three names are:

- DATE ENTERED
- DATE RECEIPT RECEIVED
- DATE TCMD RECEIVED

The cause of multiple abbreviations, as explained by USASAC, is different programmers working on different programs. This points out the need for a data element referee or custodian to arbitrate such problems and to standardize the data elements used in the system.

(3) Multiple Definitions. The third type of problem encountered is represented by the data element name "IL CONTROL NUMBER." In this instance, the problem is that of a data element having two different definitions while sharing the same name, abbreviation ("IL-CON-NO"), and DARCOM Systems Management and Control Structure code. The proponent office symbols are different as are the files in which they are used. The definitions are:

(a) Four digit case designator/case designator suffix code.
(b) A record control number is indicated if the international logistics (IL) program is grant aid. If the IL program is foreign military sales or a supply support arrangement, a three character alphabetic designator is furnished.

It does not appear as though these two definitions have the same meaning or intent.

(4) A combination multiple abbreviation/definition problem is indicated by a third data element "IL CONTROL NUMBER" having the abbreviation "IL-CON-NR." Even though the definition for "IL-CON-NR" matches that in paragraph 2c(3)(b) of this section, other information such as proponent office symbol, DARCOM Systems Management and Control Structure code, and the file it is used in do not match the corresponding information for the earlier example in paragraph 2c(3)(b) of this section.

(5) Another type of problem concerns the terms "NATIONAL STOCK NUMBER" and "NORTH ATLANTIC TREATY ORGANIZATION STOCK NUMBER."

(a) Confusion between which of these terms is correct requires an explanation prior to delving into the actual problem to be discussed.

1. The term "NORTH ATLANTIC TREATY ORGANIZATION STOCK NUMBER" (abbreviated "NATO-STOCK-NO") is defined in the July 1979 DARCOM DED as:

   The National Stock Number which contains the North Atlantic Treaty Organization Code (NATO) between the Federal Supply Class (FSC) and the National Item Identification Number (NIIN). The NATO plus the NIIN equal the National Item Identification Number (NIIN).

2. This definition is ill worded at the end. What is meant is that the NATO plus the old NIIN combines to form a new NIIN. Any other reading leaves the author with the impression of a typographical error and errant editing.

3. Additional confusion results in looking at the abbreviation of "NORTH ATLANTIC TREATY ORGANIZATION STOCK NUMBER." As listed in the July 1979 DARCOM
DED, the abbreviation is "NATO-STOCK-NO." It is feared that lack of publicity leads most DARCOM personnel to believe that the abbreviation for "NORTH ATLANTIC TREATY ORGANIZATION STOCK NUMBER" is "NSN."

(b) The real problem, uncovered when editing entries for correctness, is the multiplicity of definitions to be found for the term "NATIONAL STOCK NUMBER."

1. The CCSS (DARCOM DED, July 1979) definition is:

A number assigned under the Federal Cataloging Program to each approved United States Federal Item Identification. It consists of the four digit Federal Supply Classification (FSC) and the nine digit assigned National Item Identification Number (NIIN).

2. The definition listed in the April 1980 Customer Relations Newsletter, Appendix A (Definitions of Data Elements), published by the Defense Logistics Services Center, is:

A thirteen-digit number of which the first set of four digits represents the Federal Supply Classification (FSC), the second set of two digits designates a National Codification Bureau (NCB) code. The NCB and the remaining set of seven digits represents the National Item Identification Number (NIIN).

3. The Defense Integrated Data System DED (DOD 4100.39-D) does not list or define "NATIONAL STOCK NUMBER - NSN."

4. A third definition is listed in AR 310-25, Dictionary of United States Army Terms, 15 September 1975. Confusion immediately is evidenced in the title of the term which contains both national and NATO:

national/NATO stock number (A) - A two-part number assigned to each item of supply repetitively used, purchased, stocked, or distributed within the Federal Government. The first part of the number consists of the applicable four-digit class code number of the Federal Supply Classification. The second part of the number consists of a series of nine numerals and is known as the National Item Identification Number. The National Stock Number will be referred to whenever addressing United States materiel management functions. The term "NATO Stock Number" will be referred to whenever addressing materiel management functions of NATO Headquarters or individual NATO countries.
Note that AR 310-25 offers no abbreviation for the term, and this more lengthy definition contains the essence of the DARCOM definition but does not capture the more detailed explanation offered by the Defense Logistics Services Center definition.

5. The term "NATIONAL STOCK NUMBER" is defined in the Joint Chiefs of Staff Publication 1 (JCS Pub. 1), Department of Defense, Dictionary of Military and Associated Terms, dated 1 June 1979, as follows:

National Stock Number - (DOD). The 13-digit stock number replacing the 11-digit Federal Stock Number. It consists of the 4-digit Federal Supply Classification code and the 9-digit National Item Identification Number. The National Item Identification Number consists of a 2-digit National Codification Bureau number designating the central cataloging office of the NATO or other friendly country which assigned the number and a 7-digit (XXX-XXXX) nonsignificant number. The number shall be arranged as follows: 999-00-999-9999. See also Federal Stock Number.

Notice the term is National Stock Number; NATO Stock Number is not listed in JCS Pub. 1.

c. Just as the lack of publicity over the correct abbreviation for NATO Stock Number and National Stock Number is confusing, so too is this definitional problem between the different sources listed.


a. The purpose of the DARCOM Systems Management and Control Structure code is described in AMCR 18-5, Volume 2, paragraph 1-1, as: "...provide a means of classification and control through the mission, cell, and subcell structure of all manual and automated information and data systems established and utilized throughout the..." US Army Materiel Development and Readiness Command. This code classifies DARCOM missions, functions, and subfunctions and those data elements therein. Each data element is assigned a separate code for each combination of
mission, cell, subcell, and management activity. The DED Management Activity Code identifies the activities using the data element for the application signified by the mission, cell, and subcell coding. ALMSA has responsibility for updating this entire code and recording it in their DARCOM DED.

b. This study relates generally to the mission designated as "4" (Logistic Support) and in particular to the cell (or function) labeled "F" (International Logistics). Within the "F" cell, there are 11 subcells (subfunctions) coded "01" through "11." Appendix E of this report contains selected pages of DARCOM-R18-5, Volume 2, Appendices A, B, and C relating to the DARCOM Systems Management and Control Structure code.

c. By examining the DARCOM Systems Management and Control Structure code, an analyst can determine the users of any data element and the application (down to subcell level) for which it is used. However, when checking CISIL data elements against the Commodity Command Standard System (CCSS) DARCOM DED, it was found that CCSS did not record USASAC (CISIL proponent) as user of some data elements copied from CCSS as CISIL was developed.

(1) An example is the term "NATIONAL STOCK NUMBER" used in CISIL and in CCSS. This term, as were many other terms, was originally copied from CCSS because that system had a fairly complete DED and it was practical to use these terms.

(2) The term "NATIONAL STOCK NUMBER" appears in the complete CCSS DED, but does not have a DARCOM Systems Management and Control Structure code listed with the necessary "F" cell to denote International Logistics and therefore does not appear in the Security Assistance Data Element Catalog (SADEC) with CCSS as the proponent.
(3) This is one example of a term which possibly should have a code designating it as being used in security assistance. If such a common term lacks the proper coding, then we must question how many other data elements in the DARCOM DED are lacking complete coding or are incorrectly coded.

(4) ALMSA cannot control which organizations use terms from the DARCOM DED so they are not totally responsible for incomplete coding. However, ALMSA should take the lead (as the proponent for the DARCOM DED) in assuring the information entered in their DED is as accurate and complete as possible.
1. **Summary.**

   a. When manpower, dollar, and time constraints are placed on a system developer and career evaluations (civilian and military) are based on the timeliness of project completion, short cuts will be taken. Documentation of data elements appears to be an area where short cuts are taken and seldom corrected. As programmers and functional specialists take other jobs, we (the Army) find ourselves with a system containing unnecessary duplication, new personnel unfamiliar with the system origin, and no resources to correct the situation.

   b. Enforcement of existing regulations and implementation of the recommendations listed below will promote objective number four (4) of the Security Assistance goal in DA Pam 701-1, Direction for Army Logistics, January 1980. This objective is to: "Establish an improved management information system for the security assistance program." This study effort is particularly relevant to two of the action items of this objective. They are:

      (1) "Develop the essential elements of information required to manage security assistance program" and

      (2) "Develop and implement a comprehensive plan to obtain these elements of information."

   c. The Security Assistance Data Element Catalog (SADEC) Custodian should receive notification as changes occur to the data elements of feeder systems. These changes can then be made to the SADEC to keep it up to date.

   d. Publication of the SADEC should be made at least quarterly so that data element changes are broadcast to potential users. Due to the volume of
paper and time required to print the SADEC, distribution on microfiche may offer a solution to the cost of distribution.

2. Findings.

   a. No Data Element Dictionary (DED) or glossary of terms exists for some current Automatic Data Processing (ADP) systems.

   b. Some commonly used terms have different names, abbreviations, and definitions assigned by different levels in the Department of Defense (DOD) hierarchy.

   c. No single activity is currently responsible for maintaining security assistance data element integrity.

3. Conclusions.

   a. Duplication of data element names, abbreviations, and definitions exists within and between information systems.

   b. Maintenance of Data Element Dictionaries and/or glossaries needs increased attention by system proponents.

4. Recommendations.

   a. The US Army Security Assistance Center (USASAC) should be designated the US Army Security Assistance Program Data Element Custodian.

   b. The Data Element Custodian should maintain, update, and standardize data elements used in the Security Assistance Program.

   c. The Security Assistance Data Element Custodian should broaden the scope of the Security Assistance Data Element Catalog to include all data elements used to manage security assistance.

   d. System developers should adhere to DOD Standard 7935.1-S, Automated Data Systems Documentation Standards, and be held accountable for correct system implementation.

   e. Require system proponents to institute programs to standardize codes and definitions consistent with guidance from the highest level in the DOD hierarchy.
APPENDIX A

GLOSSARY OF TERMS AND ABBREVIATIONS
## APPENDIX A

### GLOSSARY OF TERMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACOCS</td>
<td>Army Customer Order Control System</td>
</tr>
<tr>
<td>AIPS</td>
<td>Army Information Processing Standards</td>
</tr>
<tr>
<td>ALMSA</td>
<td>US Army Automated Logistics Management Activity</td>
</tr>
<tr>
<td>AMCR</td>
<td>AMC Regulation</td>
</tr>
<tr>
<td>AMIS</td>
<td>Army Management Information System</td>
</tr>
<tr>
<td>APARS</td>
<td>Army Procurement and Reporting System</td>
</tr>
<tr>
<td>APOC</td>
<td>Army Point of Contact</td>
</tr>
<tr>
<td>AR</td>
<td>Army Regulation</td>
</tr>
<tr>
<td>ARA</td>
<td>Assigned Responsible Agency</td>
</tr>
<tr>
<td>BASIC</td>
<td>Beginners All-Purpose Symbolic Instruction Code</td>
</tr>
<tr>
<td>CCSS</td>
<td>Commodity Command Standard System</td>
</tr>
<tr>
<td>CISIL</td>
<td>Centralized Integrated System for International Logistics</td>
</tr>
<tr>
<td>COBOL</td>
<td>Common Business Oriented Language</td>
</tr>
<tr>
<td>DA</td>
<td>Department of the Army</td>
</tr>
<tr>
<td>DADEMS</td>
<td>Department of the Army Data Element Management System</td>
</tr>
<tr>
<td>DARCOM</td>
<td>US Army Materiel Development and Readiness Command</td>
</tr>
<tr>
<td>DE</td>
<td>Data Element</td>
</tr>
<tr>
<td>DED</td>
<td>Data Element Dictionary</td>
</tr>
<tr>
<td>DIDS</td>
<td>Defense Integrated Data System</td>
</tr>
<tr>
<td>DIFS</td>
<td>Defense Integrated Financial System</td>
</tr>
<tr>
<td>DLA</td>
<td>Defense Logistics Agency</td>
</tr>
<tr>
<td>DLSC</td>
<td>Defense Logistics Services Center</td>
</tr>
<tr>
<td>DMIS</td>
<td>Directorate for Management Information Systems</td>
</tr>
<tr>
<td>DOD</td>
<td>Department of Defense</td>
</tr>
<tr>
<td>DODD</td>
<td>Department of Defense Directive</td>
</tr>
<tr>
<td>DODI</td>
<td>Department of Defense Instruction</td>
</tr>
<tr>
<td>DSAA</td>
<td>Defense Security Assistance Agency</td>
</tr>
</tbody>
</table>

A-2
FSC Federal Supply Class
FY Fiscal Year

HQ DA Headquarters Department of the Army
HQ MIS Headquarters Management Information System (DARCOM)

IDE Interim Data Element
IL International Logistics
IPSC Information Processing Standards for Computers (DOD)

JCS Joint Chiefs of Staff

LSO Logistics Studies Office

NATO North Atlantic Treaty Organization
NCAD New Cumberland Army Depot
NCB National Codification Bureau
NIIN National Item Identification Number
NSN National Stock Number

OASD(C) Office of the Assistant Secretary of Defense (Comptroller)

SA Security Assistance
SADEC Security Assistance Data Element Catalog
SADECA Security Assistance Data Element Catalog, Section A
SADECB Security Assistance Data Element Catalog, Section B
USACSSEA  US Army Computer Systems Support and Evaluation Agency
USASAC    US Army Security Assistance Center
USASAC-NCAD US Army Security Assistance Center - New Cumberland
            Army Depot
APPENDIX B

BIBLIOGRAPHY

1. AMCR 18-3, AMC Information and Data Systems Master File Organization, 14 July 1965.
5. AR 18-12, Catalog of Standard Data Elements and Codes, 29 March 1974.
6. AR 18-12-5, Catalog of Standard Data Elements and Codes, 30 August 1974.
14. DODD 5000.11, Data Elements and Data Codes Standardization Program, 7 December 1964.
15. DODD 5105.22, Defense Logistics Agency (DLA), 8 June 1978.
16. DODI 5000.12, Data Elements and Data Codes Standardization Procedures, 27 April 1965.

18. JCS Pub. 1, Department of Defense, Dictionary of Military and Associated Terms, 1 June 1979.

19. DA Pam 701-1, Directions for Army Logistics, January 1980.
APPENDIX C

DATA CALL
APPENDIX C

DATA CALL

DEPARTMENT OF THE ARMY
USA SECURITY ASSISTANCE CENTER
500 EISENHOWER AVENUE
ALEXANDRIA, VA 22312

MAY 9 1980

DASC-WS/35

SUBJECT: Catalog of IL-Related Data Elements

Director
Defense Security Assistance Agency
ATTN: Controller - Data Management Division
Room 4B735
Pentagon
Washington, DC 20301

1. The US Army Security Assistance Center (USASAC) has tasked the Logistics Studies Office at Ft. Lee, VA to perform the study "Catalog of IL-Related Data Elements." The purpose is to consolidate basic data element information into a management tool which will facilitate quick and accurate responses to inquiries of customer clients and higher authorities as well as aiding in the managerial decision-making process. I am positive you can see the merits of such an "on-line" management tool. In this regard, it is USASAC's objective to provide your Agency a copy of the final product and also provide you periodic updates.

2. It is requested that you provide the desired information on the International Logistics (IL) data elements in your Defense Integrated Financial System as well as the 1200/1100/1000/systems on magnetic tape in the format described at Inclosure 1. A response by 15 June 1980 will be greatly appreciated.

3. The magnetic tape submission should be addressed to:

Commandant
US Army Logistics Management Center
ATTN: DRMC-LSO (Mr. Higgins)
Fort Lee, Virginia 23801

DUANE R.W. MURTONAKI
Chief, Systems Analysis Division
Plans and Systems Analysis

May 13 1980

L Commandant, US Army Logistics Management Center
ATTN: DRMC-LSO (Mr. Higgins), Ft Lee, VA 23801
FORMAT FOR MAGNETIC TAPE

1. Request your submission be on magnetic tape, 9 track, 800 BPI, either ASCII or EBCDIC (please specify) without labels or any special control characters.

2. For each Data Element entry, the requested format is:
   
a. **Line 1.** Blanks in cc 1-5.
   Data Element Name in cc 6-78.
   Blank in cc 79.
   1 in cc 80.

b. **Line 2.** Blanks in cc 1-5.
   Data Element Abbreviation in cc 6-78.
   Blank in cc 79.
   2 in cc 80.

c. **Line 3.** Blanks in cc 1-20.
   Proponent Office Symbol in cc 21-37.
   Standardization Level (enter DOD, DA, DARCOM, etc. if standardized) (Blank if DE has not been standardized) in cc 38-47.
   Enter SDE (for Standard Data Element) or IDE (for Interim Data Element) or leave blank if neither SDE or IDE in cc 48-50.
   Effective date of standardization (enter as YYMD) in cc 51-56 (blank if DE has not been standardized).
   Blanks in 57-79.
   3 in cc 80.

d. **Line 4.** Blanks in cc 1-5.
   DE Definition in cc 6-78.
   Blank in cc 79.
   4 in cc 80.

   (Continue definition on lines 5-9 with corresponding number in cc 80, lines 10-97 will have a corresponding 10-97 in cc 79-80 in the same format as line 4 until the entire DE definition has been entered. This definition should not include input codes for the data described in the definition). **Number each additional line required.**

e. **Line 99.** Blank in cc 1-5
   Enter applicable System Management and Control codes
   cc 6-78 99 in cc 79-80

3. If the above format is impossible to follow, enter only the requested data on magnetic tape with a full hardcopy description of the tape format included to aid LSO retrieval.
APPENDIX D

SELECTED DODI 5000.12

DEFINITIONS
APPENDIX D

SELECTED DODI 5000.12 DEFINITIONS

Assigned Responsible Agency (ARA) - DOD component receiving assignment to chair a working group of affected DOD components to develop a recommendation to the Assistant Secretary of Defense (Comptroller) for standardization of specific Data Elements and related features. After approval of a recommended specific standard by the Assistant Secretary of Defense (Comptroller), the ARA will maintain the standard by evaluating, approving, and coordinating changes in related features.

Data Code - A number, letter, character, symbol, or any combination thereof used to represent a Data Item. For example, the Data Codes "36," "04," and "06" might be used to represent the Data Items of Technical Sergeant, Major and Colonel under the Data Element "military personnel grade."

Data Element - A grouping of informational units which has a unique meaning and subcategories (Data Items) of distinct units or values. Examples of Data Elements are military personnel grade, sex, race, geographic location, and military unit.

Data Item - A subunit of descriptive information or values classified under a Data Element. For example, the Data Element "military personnel grade," contains Data Items such as Technical Sergeant, Major, and Colonel.

Data System - Combination of personnel efforts, forms, formats, instructions, and procedures, Data Elements and related Data Codes, communications, and data processing equipment, which provide an organized and interconnected means, either automated, manual, or a mixture of these for recording, collecting, processing, and communicating data.

Data Use Identifier - The name given to the use of a Data Element in a data system. For example, the Data Element "State," when used in a system may be assigned a Data Use Identifier "State of Birth" or "State of Residence."
APPENDIX E

DARCOM SYSTEMS MANAGEMENT AND CONTROL CODE
### APPENDIX E

**DARCOM SYSTEMS MANAGEMENT AND CONTROL STRUCTURE CODE**

1. Excerpt from AMCR 18-5, Volume 2, Appendix A, Mission Structure for Classification of AMC Information and Data Systems:

<table>
<thead>
<tr>
<th>Mission</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Resources Management.</strong> A set of disciplines and procedures encompassing all of the processes involved in planning for the accomplishment of missions; estimating and establishing required resources; assigning time-phased objectives and tasks to operating agencies; issuing planning, programing, and budgeting directives; reporting, reviewing, and analyzing performance and resources utilization; and rendering managerial and operational decisions (AMCR 11-4, Vol. 1).</td>
</tr>
<tr>
<td>2</td>
<td><strong>Scientific and Technical Development.</strong> Those management and support missions involved in the collection, storage, and dissemination of scientific and technical data in the conduct and support of research, development, test, and evaluation of materiel. Included are basic research, theoretical studies, scientific experiments, applied research, feasibility studies, engineering design studies, weapons system analysis, operations research, development engineering, fabrication of experimental models and prototypes, the conduct of scientific, technical, and weapons effect experiments; and tests for evaluation of articles built in-house, commercially procured, or received from foreign sources, and quality control testing of items for conduct of service tests.</td>
</tr>
<tr>
<td>3</td>
<td><strong>Item Data Control.</strong> Those management and support missions involved in the collection, storage, retrieval, and dissemination of technical logistic item data regarding: Design, provisioning, procurement, production, requirements, standardization, product assurance, calibration, value engineering, cataloging, technical manual preparation, maintenance returns, storage, issue, and disposal.</td>
</tr>
<tr>
<td>4</td>
<td><strong>Logistics Support.</strong> Those management and support missions involved in stock control, International Logistics, provisioning, cataloging and transportation, and the establishment of a materiel pipeline to provide necessary items of equipment and supplies to a service, formation, organization, or unit in fulfillment of its objective.</td>
</tr>
<tr>
<td>5</td>
<td><strong>Materiel Acquisition.</strong> Those management and support missions involved in determination of materiel requirements, development, procurement, production, and manufacture of Army materiel.</td>
</tr>
</tbody>
</table>
2. Excerpt from AMCR 18-5, Volume 2, Appendix B, Cell Structure for Classification of AMC Information and Data Systems:

<table>
<thead>
<tr>
<th>Mission Cell</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td><strong>Logistics Support.</strong></td>
</tr>
<tr>
<td>4A</td>
<td>Stock Control. Those management and support functions involved in maintenance of pertinent data on the quantity, location, and condition of supplies and equipment due-in, on hand, and due out and in management of supply operations so that distribution can be effected with a minimum amount of supplies and equipment in the distribution system.</td>
</tr>
<tr>
<td>4F</td>
<td><strong>International Logistics.</strong> Those management and support functions involved in planning, programing, and reporting of materiel and services furnished to foreign countries under the International Logistics Program.</td>
</tr>
<tr>
<td>4M</td>
<td>Maintenance. Those management and support functions involved in maintaining materiel in a serviceable condition or to restore same to serviceability, including inspection, testing, servicing, classification as to serviceability, repair, rebuild, and reclamation. It also includes those functions involved in the production, scheduling, and control of items that will be overhauled, rebuilt, or repaired in-house or by contract; the schedule of maintenance support planning reporting system for management of major actions and support elements required to develop support for items of new materiel at initial issue; the Maintenance Engineering Analysis and Data System (MEADS) for collection, recording, analysis, retrieval, and production of maintenance engineering technical data and documentation including the concept, definition, development, and production phases of new materiel; cost and personnel utilization data for PE730000, Maintenance Support Services, including supporting programs; providing management data essential for the planning, production, and control over the AMC equipment publications program.</td>
</tr>
<tr>
<td>4X</td>
<td>Provisioning. Those management and support functions involved in the identification, establishment, or modification of catalog data, RPSTL, technical manual, item application data, and allowance table data, determination of or changes to range and quantity of items required to support end items; and the concurrent or continued delivery of necessary support items with related end items.</td>
</tr>
<tr>
<td>Mission Cell Subcell</td>
<td>Titles and Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4 F</td>
<td><strong>International Logistics Program (ILP).</strong></td>
</tr>
<tr>
<td></td>
<td><strong>International Logistics Requisitions Process.</strong> This process provides for the receipt, validation, supply execution and status processing related to ILP requisitions, receipt of assets, backorder releases and billing. It also provides the ability to suspend supply execution, initiate action to frustrate/divert shipments when a case/program has been suspended by direction of higher authority or when funds allocated will be exceeded.</td>
</tr>
<tr>
<td>4 F02</td>
<td><strong>International Logistics Supply/Delivery Plan (ILSDP).</strong> This process provides the capability to extract the necessary intelligence from the commodity commands data base to support the preparation of the ILSDP. This process includes updating of delivery slippage for managerial decision relating to reforecast/asset diversion.</td>
</tr>
<tr>
<td></td>
<td><strong>Military Articles and Services List (MASL).</strong> This process pertains to the maintenance, verification and update of data in the MASL. It includes the processing of change requests relative to price, leadtime, type classification code and footnote code as well as recommended additions/deletions to provide planning, programming and budget data to management.</td>
</tr>
</tbody>
</table>

**Hardcore
<table>
<thead>
<tr>
<th>Mission Cell</th>
<th>Subcell</th>
<th>Titles and Description</th>
<th>Scope of Interest</th>
<th>Consol Data Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 F07</td>
<td></td>
<td>International Logistics Requisition/Status Process. This process accomplishes the necessary functions related to the preparation of ILC initiated requisitions (defined lines and concurrent spare parts), in-country prepared requisitions, and the receipt of advice/supply status. It includes those edit validation routines for format, posting of advice/supply status, providing of status of country, and follow-ups to supply sources. On outgoing requisitions, it includes that validation for type of program, program authority, stock fund authority (DSA/GSA) and also special SIMEX and HIMEX procedures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>J AMCIL/AMCMS-E D-X</td>
<td></td>
<td>ILC</td>
</tr>
<tr>
<td>4 F08</td>
<td></td>
<td>International Logistics Fiscal Processes. These processes will include the reservation of funds, disbursements and liquidation of accounts payable, billed accounts receivable, maintenance of general ledgers. Included also are the functions for controlling, monitoring and expediting ILP closeouts. It includes the process related to the receipt of interfund billing and the preparation of an out-billing document for forwarding to US Army Finance and Comptroller Information Systems Command (USAFINCISCO). The process also includes the functions related to the receipt of a constructive delivery document and forwarding of a billing document to USAFINCISCO. Nonreimbursable deliveries will be recorded in the Master Program Case record.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mission Cell Subcell</td>
<td>Titles and Description</td>
<td>Scope of Interest</td>
<td>Responsibilities</td>
<td>Consol Data Bank</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>4 F09</td>
<td>Supply Support Arrangement Foreign Military Sales Order (FMSO) and Catalog Data. These are the processes necessary for a foreign country to buy support for in-country end items utilizing the US Army Supply System. Included are: FMSO 1 - with list identifying the secondary items, quantitites and value of items to be stocked. FMSO 2 - Estimated Consumption. In addition, catalog data are developed utilizing the Army Master Data File and tailored to the particular countries needs.</td>
<td>J AMCIL/AMCMS-E</td>
<td>D-X</td>
<td>ILC</td>
</tr>
<tr>
<td>4 F10</td>
<td>Discrepancy Report Process. These are functions related to the receipt, validation, and processing of country initiated discrepancies.</td>
<td>J AMCIL/AMCMS-E</td>
<td>D-X</td>
<td>ILC</td>
</tr>
<tr>
<td>4 F11</td>
<td>International Logistics Program Reports. This process provides for the preparation of all recurring reports required by DOD, DA, AMC, and other Government agencies.</td>
<td>J AMCIL/AMCMS-E</td>
<td>D-X</td>
<td>ILC</td>
</tr>
</tbody>
</table>
APPENDIX F

COMPUTER PROGRAMS
APPENDIX F
COMPUTER PROGRAMS

1. Annex B to this report is a magnetic computer tape containing files and programs used in the construction of the Security Assistance Data Element Catalog. The master file is named SADEC and is a combination of the three system files named CCSS, CISIL, and HQ MIS. The system files contain all the data element information collected from each system.

2. The system files are included on the tape to permit each system to be updated as necessary and printed out individually.

3. Computer programs which generate the first two sections of this report are also entered on the tape. The other two sections of this report were generated by using machine utility programs.

4. The program generating Section A of the SADEC is called SADECA:

```
SADECA
10 DIM Z$(84)
20 DIM A$(80)
30 FILES SADEC
40 INPUT #1;Z$
50 UN #1, TM#N 120
60 A$=Z$(5,84)
70 PRINT A$(1,78)
80 IF A$(79,80)="99" THEN 90
90 PRINT
100 DOEND
110 GOTO 40
120 END
```
5. The following excerpt of Section A shows the product of the above program:

```
5. The following excerpt of Section A shows the product of the above program:

ACCEPTANCE DATE
ACCEPTANCE DATE
ACCEPTANCE DATE

ACPY.R
TMT.

DATE
THAT
APPEARS
ON
THE
DU
FORM
1513
AND
INDICATES
THE
DATE
A
FOREIGN
BUYER
AGREED
TO
ACCEPT
THE
ITEMS
AND
CONDITIONS
CONTAINED
IN
THE
OFFER.
FORMAT
OF
DATE
IS
YYMMDD.

ACPY.R
TMT.

DATE
THAT
APPEARS
ON
THE
DU
FORM
1513
AND
INDICATES
THE
DATE
A
FOREIGN
BUYER
AGREED
TO
ACCEPT
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ITEMS
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CONTAINED
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THE
OFFER.
FORMAT
OF
DATE
IS
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ACPY.R
TMT.

DATE
THAT
APPEARS
ON
THE
ACCEPTANCE
PORTION
OF
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FORM
1513
AND
INDICATES
THE
DATE
A
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AGREED
TO
ACCEPT
THE
ITEMS
AND
CONDITIONS
CONTAINED
IN
THE
OFFER.
FORMAT
OF
DATE
IS
YYMMDD.
```

6. Section B of the SADEC is generated by the program named SADECB:

```
SADECB
10 J1M 00
20 U1M A3(00)
30 U1M B3(00)
40 U1M C3(00)
50 FILES SADEC
60 LINPUT #1:25
70 JN EN #1 THEN 100
80 AS=A3(15,841)
90 IF AS(79,DU)=" 1" THEN 100
100 U3=A5(1,74)
110 JUNE
120 IF AS(79,DU)=" 3" THEN 100
130 C3=A5(1,91)
140 JUNE
150 IF LS<"" THEN GOSUB 190
160 CS=""
170 JUNE 60
180 END
190 PRINT USING 200186,C3
200 IMAGE 74A,6A
210 RETURN
```

7. The following is an excerpt of Section B of the catalog.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTANCE DATE</td>
<td></td>
</tr>
<tr>
<td>ACCEPTANCE DATE</td>
<td></td>
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<td>ACCEPTANCE DATE</td>
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<tr>
<td>ACCEPTANCE DATE</td>
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<tr>
<td>ACCEPTANCE DATE FISCAL YEAR</td>
<td></td>
</tr>
<tr>
<td>ACCESSORIAL BILL POST INCTR</td>
<td></td>
</tr>
<tr>
<td>ACCESSORIAL BILLED VALUE</td>
<td></td>
</tr>
<tr>
<td>ACCESSORIAL BILLED VALUE</td>
<td></td>
</tr>
<tr>
<td>ACCESSORIAL CHARGE AMOUNT</td>
<td></td>
</tr>
<tr>
<td>ACCESSORIAL CHARGE BILLED</td>
<td></td>
</tr>
<tr>
<td>ACCESSORIAL CHARGE CODE</td>
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<tr>
<td>ACCESSORIAL CHARGE CODE</td>
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<td>ACCESSORIAL CHARGE CODE</td>
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<tr>
<td>ACCESSORIAL CHARGE CODE</td>
<td></td>
</tr>
<tr>
<td>ACCESSORIAL CHARGE LINE NUMBER</td>
<td></td>
</tr>
<tr>
<td>ACCESSORIAL CHARGE LINE NUMBER</td>
<td></td>
</tr>
</tbody>
</table>

8. Section C of the catalog was produced with the aid of a utility sort program available on the Hewlett-Packard 3000 computer. Other computers will likely have different utility routines; therefore, no program is shown for this section. The master file SADEC was the source file.
9. Excerpts from Section C of the catalog are:

- **ACPDY**
  - ACCEPTANCE DATE
- **ACPT-DT**
  - DATE OF ACCEPTANCE
- **ACPT-DT**
  - ACCEPTANCE DATE
- **ACPT-UT**
  - ACCEPTANCE DATE
- **ACPT-UT-FY**
  - ACCEPTANCE DATE FISCAL YEAR
- **ACPUN**
  - ACCEPTANCE DATE

10. Section D of the Security Assistance Data Element Catalog was produced using the SADEC master file and utility programs available on the Hewlett-Packard 3000 computer used by the study agency. An excerpt from Section D is entered below to provide the reader with a glimpse of the product.

- **F06CL CCSS**
  - MAP UNIT PRICING IDENTIFIER CODE
- **F06CL CISIL**
  - MAP UNIT PRICE
- **F06CL CCSS**
  - MAP UNIT PRICE
- **F06CL CCSS**
  - MARK FUM
- **F06CL CCSS**
  - MNLX AND STATUS CODE
- **F06CL CISIL**
  - METHOD OF FUNDING
- **F06CL CCSS**
  - METHOD OF FUNDING CODE
- **F06CL CISIL**
  - MISSILE MOUNT INDICATOR
- **F06CL CCSS**
  - MONTH / YEAR CREDIT
- **F06CL CCSS**
  - MONTH AND YEAR
- **F06CL HU MIS NATIONAL STOCK NUMBER**
- **F06CL HU MIS NATIONAL STOCK NUMBER**
- **F06CL CISIL NATIONAL STOCK NUMBER**
- **F06CL CCSS NATIONAL STOCK NUMBER COUNT = PRESENT**
- **F06CL CCSS NATIONAL STOCK NUMBER COUNT = TOTAL**
- **F06CL CISIL NATIONAL STOCK NUMBER END ITEM**
- **F06CL CISIL NATIONAL / NATO STOCK NUMBER**
APPENDIX G

RECOMMENDED SECURITY ASSISTANCE DATA ELEMENT CATALOG (SADEC)

UPDATING PROCEDURES
APPENDIX G

RECOMMENDED SECURITY ASSISTANCE
DATA ELEMENT CATALOG (SADEC)
UPDATING PROCEDURES

1. Appendix C contains the format used in the construction of the security assistance catalog with one minor revision. The "99" card is used for entering the DARCOM Systems Management and Control Structure code. The format in the data call did not specify how these codes were to be entered, hence the need for clarification. To promote readability, two spaces should be placed between each five-digit entry on the "99" card line. This follows the pattern of the original catalog. If more than 11 entries are required on the "99" card line, a change to the program(s) will be necessary. It is suggested that a "98" card be used for this purpose.

2. The program language used in this effort is Beginners All-Purpose Symbolic Instruction Code (BASIC). Each system's file of cataloged data was placed into editor files to permit easy addition, deletion, or change as necessary. The programs use the editor file(s) as their source to print out the various sections of the catalog.

3. The three system files of the included systems are:
   c. DARCOM Headquarters Management Information System (HQ MIS).

The three files were merged into one consolidated master file called SADEC for Security Assistance Data Element Catalog.
4. The master file (SADEC) with the programs listed in Appendix F produce the complete Security Assistance Data Element Catalog. As data elements are added to, deleted, or changed in the present three systems, the necessary change is made to the particular system file (CCSS, CISIL, or HQ MIS). When an additional system is added to the SADEC, a new system file must be built and merged into the SADEC master file.

5. Because the study agency used the BASIC language on its HP 3000 computer and the agency to be tasked with updating this catalog is unknown, the programs at Appendix F are basically illustrative of the type programs necessary to maintain this catalog. The most difficult part of this project was obtaining raw data in a usable format. Many other computer languages can be used with the data in the files to produce similar results. Therefore, it may be necessary to write new programs or to rewrite the programs presented.
APPENDIX H

SYSTEMS FAILING TO PROVIDE DATA
APPENDIX H

SYSTEMS FAILING TO PROVIDE DATA

Reasons that all initially assigned systems are not included in this report and associated catalog fall into three categories:

a. Deleted by study sponsor as containing insufficient numbers of data elements (APARS and Program 10).

b. Lengthy delays reported by system proponents before the requested data would become available (ACOCS and DIFS).

c. Systems under change or development with no DED available or long lead time projected for DED (DSAA 1000, 1100, and 1200).