Technical Report

AD 640 118

MECHANIZATION STUDY
OF THE DEFENSE LOGISTICS
STUDIES INFORMATION EXCHANGE,
FORT LEE, VIRGINIA

Submitted to

Defense Supply Agency
Defense Documentation Center
Cameron Station, Virginia

by

Booz, Allen Applied Research Inc.
4733 Bethesda Avenue
Bethesda, Maryland 20014

Under Contract No. DSA-7-15489
BAARINC Report No. 914-1-23
September 1966

Best Available Copy
ABSTRACT

An RCA 501 computer is used by the Defense Logistics Studies Information Exchange to produce a thesaurus, demand bibliographies, code listings, and the Annual Department of Defense Bibliography of Logistics Studies and Related Documents. A card catalog file is maintained but will probably be discarded within 5 to 10 years. The Exchange has applied for status as a DoD Information Analysis Center; it has also been assigned an additional mission of maintaining a DoD Inventory of Technical Data and Related Efforts. Development of the thesaurus will continue, and the Annual Bibliographies and Quarterly Supplements will be printed by GPO from data on magnetic tape as soon as equipment becomes available at GPO. A survey conducted in 1963 indicated that patrons were satisfied with the services provided by the Exchange.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td>INDEX OF FIGURES</td>
<td>v</td>
</tr>
<tr>
<td>I. SUMMARY</td>
<td>1</td>
</tr>
<tr>
<td>II. MECHANIZATION</td>
<td>3</td>
</tr>
<tr>
<td>1. Chronology</td>
<td>3</td>
</tr>
<tr>
<td>2. Thesaurus Development</td>
<td>3</td>
</tr>
<tr>
<td>3. Description of Processes</td>
<td>8</td>
</tr>
<tr>
<td>(1) Input Procedures</td>
<td>8</td>
</tr>
<tr>
<td>(2) Outputs</td>
<td>11</td>
</tr>
<tr>
<td>4. Major Problems</td>
<td>14</td>
</tr>
<tr>
<td>5. Activities Being Planned or Developed for Mechanization</td>
<td>14</td>
</tr>
<tr>
<td>III. PROGRAM SYSTEM DATA</td>
<td>16</td>
</tr>
<tr>
<td>1. Files</td>
<td>16</td>
</tr>
<tr>
<td>2. Programs</td>
<td>17</td>
</tr>
<tr>
<td>IV. EQUIPMENT, COSTS, AND EVALUATION</td>
<td>22</td>
</tr>
<tr>
<td>1. Equipment</td>
<td>22</td>
</tr>
<tr>
<td>2. Costs and Time</td>
<td>22</td>
</tr>
<tr>
<td>3. Facility's Evaluation of System</td>
<td>23</td>
</tr>
</tbody>
</table>
APPENDICES

A. ORGANIZATION CHART

B. SAMPLES OF OUTPUTS
### INDEX OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Keypunch Coding Sheet</td>
<td>9-10</td>
</tr>
<tr>
<td>2.</td>
<td>New Entry Forms</td>
<td>12</td>
</tr>
<tr>
<td>3.</td>
<td>Retrieval Worksheet</td>
<td>21</td>
</tr>
</tbody>
</table>
I. SUMMARY

An RCA 501 computer is being used by the Defense Logistics Studies Information Exchange to produce the Annual Department of Defense Bibliography of Logistics Studies and Related Documents, a thesaurus, demand bibliographies, and code listings. A backup card catalog file is also maintained but will probably be discarded within the next 5 to 10 years.

The U. S. Army Logistics Management Center, Fort Lee, Virginia, is responsible for the collection, storage, and dissemination of bibliographic information concerning logistical studies and related material. To assist the Center in accomplishing its mission, the Exchange was established in 1962. Appendix A illustrates the position of the Exchange within the Center's organization. The Exchange has a staff of nine: a manager, three reference analysts (one for each of the Armed Services), a reference librarian, two clerk-stenographers, a file clerk, and a keypunch operator. The staff receives requests for information from the Logistics Management Center, other Fort Lee activities, DoD logistics agencies, their contractors, and qualified nonmilitary requesters. The majority of users are managerial and research personnel.
The Exchange does not loan items; thus most of the requests are reference and bibliographic. Reference requests are generally by telephone. Requests for bibliographies are by memoranda or literature search request forms.

An accessions list is prepared manually by the Exchange for use by the analysts and for circulation throughout the Center. Periodicals are routed to the Exchange from the Logistics Management Center Library (also located at Fort Lee) for review by analysts and return to that Library. Entries in the DoD Bibliography, as well as demand bibliographies, refer to source of items since the Exchange is not a document source.

There are approximately 6,000 items in the current collection with an increase of approximately 2,000 per year. About 1,500 of the annual increase are included in the Annual DoD Bibliography, with approximately 375 appearing in each quarterly supplement.

Literature search requests from January thru mid-October 1965 numbered 162, averaging four per week, with 23 requests received the week of October 15. Indications were that the higher rate would continue for several weeks since many of the requests were for assistance in thesis research from students attending military schools where classes were just beginning.
II. MECHANIZATION

1. CHRONOLOGY

The Information Exchange was commissioned July 3, 1962. Plans for the computer program were developed and programming was accomplished between August and November of that year.

In January 1963, the Exchange began storing material in the file; effective operations began that spring and the first Annual Department of Defense Bibliography of Logistics Studies and Related Documents was issued.

Plans for 1966 call for a copy of the retrieval card (with microthesaurus on the back) to be added to the Annual Bibliography so that the individual user may query the computer.

2. THESAURUS DEVELOPMENT

One of the earlier problems the Exchange had to resolve was the development of a thesaurus of subject indexing terms, acceptable for bibliographic purposes to all Department of Defense agencies. It was
decided to use, as a basis, the definition of "logistics" contained in the *Dictionary of United States Military Terms for Joint Usage*. This definition follows:

"Logistics: The science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, those aspects of military operations which deal with: a. design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposition of materiel; b. movement, evacuation, and hospitalization of personnel; c. acquisition or construction, maintenance, operation, and disposition of facilities; and d. acquisition or furnishing of services."

The definition was charted as follows:

**DEFINITION OF LOGISTICS**

**MATERIEL**
- Design and Development
- Acquisition
- Storage
- Movement
- Distribution
- Maintenance
- Evacuation
- Disposition

**PERSONNEL**
- Movement
- Evacuation
- Hospitalization
The terms MATERIEL, PERSONNEL, FACILITIES, and SERVICES were extracted to serve as the major areas for subject coding, or the first depth for subject indexing. At a later date, experience justified the addition of four more first-level terms: ORGANIZATION, MANAGEMENT, RESOURCES, and OPERATIONS.

A further breakdown of the definition serves as a second indexing depth. The second-depth terms reflect the functions involved in the management of materiel from research and development to disposal. The third-depth term identifies the type of materiel, i.e., vehicles, communications equipment, ammunition, rations, clothing, weapons, etc. A breakout of an area (e.g., MATERIEL) illustrates the identification of a second and third indexing depth.

<table>
<thead>
<tr>
<th>First Depth</th>
<th>Second Depth</th>
<th>Third Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATERIEL</td>
<td>Design and Development</td>
<td>Vehicles</td>
</tr>
</tbody>
</table>

-5-
Following is an example of indexing to the fourth and fifth depth:

**MATERIEL**
- Maintenance
  - Weapons
  - Missiles
    - NIKE ZEUS

**PERSONNEL**
- Movement
  - Helicopters
  - Training
    - SWIFT STRIKE
Specific information can be retrieved about such subjects as NIKE ZEUS missile maintenance; a phase of operation "SWIFT STRIKE"; or Capehart housing construction. This detailed and special bibliographic information is available to users upon demand.

Originally no limit was placed on the number of terms assigned and no restrictions placed on the terms used for indexing. Now, however, terms must be selected from the thesaurus, and new words are added only after careful consideration. Within the past six to eight months, a detailed study was made of the thesaurus and numerous second-level terms were eliminated. In the future, a study will be made of terms used only once or twice.

Plans call for completion of thesaurus development within another year. The improved thesaurus, with scope notes, will be published and distributed to users, most likely as part of the Annual Bibliography. Coordination with Project LEX, a project to prepare a DoD-wide Technical Thesaurus, is being effected.
3. **DESCRIPTION OF PROCESSES**

Reports, books, and periodical articles in the field of logistics are analyzed and processed for inclusion into the system. From this data base, the Annual DoD Bibliography is produced, demand bibliographies are prepared upon request, and several indexes for use by the Exchange staff are prepared. All inputs are derived from the procedures outlined below.

(1) **Input Procedures**

1. Logistics studies and related documents are submitted directly to the Exchange by DoD agencies in accordance with DoD Inst 5154.19.

2. Other items are selected by the analysts and ordered by the Exchange librarian.

3. Items received on distribution or loan from the Logistics Management Center Library and items specifically requested are checked in and reviewed by the analysts.

4. The analysts complete keypunching code sheets (Figure 1) containing the author code number, logistics document number, title and author(s), AD number, contractor code number, contractor name, time frame of a continuing project, date of completion, number of pages, type of document, status of project, security classification, date published, abstract, descriptors, and type of action requested. Actions include new entries, deletions, items to be suppressed in printing the Annual Bibliography but retained in the file to appear as a result in a search query, or entries for the History File. The abstract normally answers four questions: what was sought; how it was sought; what was learned; and what can be concluded from it. Terms (descriptors) are selected from the thesaurus; new terms
<table>
<thead>
<tr>
<th>Action Requested:</th>
<th>Keypunch Coding Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Entry</td>
<td>Suppress</td>
</tr>
<tr>
<td>Change</td>
<td>History File</td>
</tr>
<tr>
<td></td>
<td>Current Supplement</td>
</tr>
<tr>
<td>Type of Change</td>
<td>Suppress</td>
</tr>
<tr>
<td></td>
<td>Delete</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1. AUTHOR (SOURCE) CODE NO.</th>
<th>2. LOGISTICS DOCUMENT NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5 Spaces)</td>
<td>(6 Spaces)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. DOCUMENT TITLE AND INDIVIDUAL AUTHOR NAMES</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Line 1, 78 Spaces)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. AD NUMBER</th>
<th>8. CONTRACTOR CODE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(7 Spaces)</td>
<td>(4 Spaces)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. CONTRACTOR NAME</th>
<th>10. (NOT USED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(64 Spaces)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. TIME FRAME</th>
<th>12. TYPE DOCUMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>(9 Spaces)</td>
<td>(14 Spaces)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13. EXPECTED COMPLETION DATE</th>
<th>NUMBER OF PAGES</th>
<th>14. STATUS</th>
<th>15. SECURITY CLASS</th>
<th>16. DATE PUBLISHED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5 Spaces)</td>
<td>+ (5 Spaces)</td>
<td>Completed</td>
<td>Top Secret</td>
<td>(5 Spaces)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(Line 1, 56 Spaces)</td>
<td>(Succeeding Lines, 77 Spaces Each)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AMXMC-RD-1  
1 July 1965  

FIGURE 1
may not be added without a careful review. New author and contractor entries may be added only after the appropriate forms have been completed and a code assigned by the librarian. (For new entry forms see Figure 2.).

5. Worksheets with the new items are sent to the Exchange librarian.

6. Worksheets are assigned an accession number by the librarian. Each title receives an accession number; volumes of the same title are assigned suffix letters: A, B, C, etc.

7. The Library's keypunch operator takes the worksheets to Computer Services and punches the information on paper tape.

8. The paper tape is verified by the keypunch operator, then given to Computer Services for processing onto magnetic tape. Additions and corrections are usually accumulated by the computer group for updating in batches of 50 - 75. (Between 400 and 500 additions are made each quarter, including items to be suppressed.)

9. Proof listings of code sheets, author and contractor revisions, distribution labels, and list corrections, generated by the computer, are returned to the Exchange for checking. Errors are noted, corrected, and returned to Computer Services for resubmission to the system.

(2) Outputs

1. Annual Department of Defense Bibliography of Logistics Studies and Related Documents

   This Bibliography (See Appendix B-1) of more than 1,500 items in the logistics field is published annually with quarterly supplements. Distribution is made to more than 330 activities. The Bibliography includes new items, continuing projects, a cumulation of the three quarterlies, and significant items from the previous annual edition.
DEFENSE LOGISTICS STUDIES INFORMATION EXCHANGE
Master File Revision Request

NEW AUTHOR ENTRY

<table>
<thead>
<tr>
<th>AUTHOR CODE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME OF AUTHOR (78 Spaces)</td>
</tr>
<tr>
<td>NAME AND ADDRESS OF AUTHOR (78 Spaces)</td>
</tr>
<tr>
<td>ADDRESS OF AUTHOR (78 Spaces)</td>
</tr>
<tr>
<td>DATE</td>
</tr>
</tbody>
</table>

FIGURE 2
New Entry Forms

-12-
2. **Demand Bibliographies**

Requests for bibliographies are forwarded to the Exchange from schools and other DoD and government agencies and their contractors, either by memo, letter, or on the standard form developed by the Exchange for use by students in military schools. The question is reviewed by the analysts, and terms to be used in the search are added to a retrieval worksheet. Items may be retrieved by subject, classification, date, corporate source, or title. Printouts from a literature search are in the same format as the entries in the Annual DoD Bibliography. Recipients of the demand bibliographies may use them as guides to what is available in the subject areas of interest. Items must be obtained from a local library or source referred to in the bibliography since the Exchange does not loan or furnish copies of documents.

3. **Inverted Index**

The computer prepares a printout (Appendix B-2) of all descriptors used at each level and indicates all posting against each descriptor within that level. At present this listing is used as the thesaurus and also in reviewing terms and their usage, repetition of terms within levels, etc. Copies of this listing are not distributed outside the Exchange.

4. **Relative Index**

This alphabetical computer printout (Appendix B-3) relates each term to the document to which it has been posted. That is, each unique combination of five descriptors is printed and the logistics document numbers are printed beneath. This list is used primarily by the analysts in reviewing and indexing the documents and is not circulated outside the Exchange.

5. **Author/Sponsor Code Listing**

This printout (Appendix B-4) provides codes assigned to each of the military agencies, grouped and assigned according to their location in the DoD, Army, Navy, and Air Force organizational structure.
6. **Contractor Code Listing**

This printout provides the same information for contractors as the Author/Sponsor Code Listing does for military activities. Codes have been assigned (on both code lists) in such a way as to allow for expansion and continuation of the alphabetical arrangement without changing the numerical sequence. New codes are added to either list only after careful consideration by the librarian.

4. **MAJOR PROBLEMS**

Communications between the DoD logistics research and management activities and the Exchange staff was a problem encountered in the program development stage. Within the Exchange staff, personnel training and standardization of subject descriptors and source codes have been minor problems.

5. **ACTIVITIES BEING PLANNED OR DEVELOPED FOR MECHANIZATION**

The Exchange has applied for status as a DoD Information Analysis Center. Expansion would increase services to include state-of-the-art reports and, at the same time, would require additional personnel.

The Exchange has been assigned an additional mission of maintaining and updating a DoD Inventory of Technical Data and Related
Efforts. This will involve, on a DoD-wide basis, the collection, storage, and dissemination of information about technical data management improvement actions underway or planned.

Thesaurus development will be pursued. Standardization and compromise will be made, especially in the third, fourth, and fifth levels of descriptors, to eliminate duplication of terms at different levels. Possibly other levels may be introduced. Also, Thesaurus File checks of descriptors will be made a part of the proof update routines to help catch errors earlier.

The Government Printing Office will print the Annual Bibliographies and the Quarterly Supplements from data on magnetic tape using existing editing programs as soon as equipment becomes available at GPO.
III. PROGRAM SYSTEM DATA

1. FILES

(1) Master History File

This file is composed of variable-length records of individual documents. Within a record, fields (as shown on keypunch coding sheet, Figure 1) are delineated by item separators. The records are in sequence by source, and within source, by logistics document number.

(2) Quarterly Supplement Document File

This file uses the same format as the Master History File but contains reference to only those documents added during the current quarter. After publication, the Quarterly Supplement Document File is merged into the Master History File.

(3) Source File

The Source File is in four sections: part one contains the names, addresses, and codes for all valid contractor document sources; part two contains the names, addresses, and codes to
all valid author/sponsor document sources; part three contains the information necessary for printing the mailing labels used for distribution; part four is the distribution list.

(4) **Thesaurus File**

This file consists of one record per official term. The descriptor level number at which the term may be used is prefixed to the term to simplify sorting. Definitions for each term will be added in the future. There are currently about 2,000 terms.

2. **PROGRAMS**

All programs were written in machine language without the benefit of an assembler, except for the Thesaurus List which was written in COBOL.

(1) **Thesaurus Check**

To verify the contents of the Quarterly Supplement Document File, each descriptor in the file is checked against the Thesaurus File. Misspellings and other nonmatches are corrected by the Exchange.
(2) Bibliography Print

The Quarterly Supplement Document File is printed by this program in the format of the Quarterly Bibliography Supplements, showing author, source, title, logistics document number, classification, descriptors, and abstract. The body of the Supplement is printed first. Each entry is assigned a line item number, and each page is numbered. A work tape is produced containing the source name and page number of each item from that source. A second work tape is produced for analysis of the use of descriptors. This tape contains four records for each item (document), the first containing level one and two descriptors, the next three containing each of the lower-level descriptors.

(3) Source Index Print

An index is printed containing the name of each source and the first, or lowest, page number for that source. This index appears in the front of the Quarterly Supplement.

(4) Inverted File Print

The second work tape is sorted by descriptors and line item number. Each unique combination of descriptors is printed with the line item number of the items described. The print is divided,
the first section containing only first and second level terms and
the second containing all terms used on any other level.

(5) **Merge**

After publication of the Quarterly Supplement Bibliography, it is merged with the Master History File. Typically, about 400 to 500 items are added per quarter, although not all of these items will appear in the Quarterly Supplement Bibliography.

(6) **Descriptor Printout**

After the preparation of each Quarterly Supplement, the inverted files are printed in two volumes. In the Relative Index, each unique combination of five descriptors is printed and the author/sponsor number and logistics document number of each item are posted under it. In the Inverted Index, five chapters (representing five levels of descriptors) show single terms and logistics document numbers of those documents using that term.

(7) **Thesaurus List**

All official terms are printed in alphabetic sequence and grouped by level. It is anticipated that definitions of terms will be added to this printout.
(8) Retrieval

A retrieval query paper tape, generated from the retrieval worksheet (Figure 3), contains from 1 to 24 questions from a single query. The paper tape is read, and the document file is searched for matching descriptors. A citation is printed for each match in the same format as the Bibliography.

(9) Single Field Search

This program searches the document file, comparing the contents of any or all of the 48 fields of a record. A new magnetic tape, in the same format, is generated containing all matches. This capability is used to reduce the file to a single major category of documents for more specific subsequent searches.
IV. EQUIPMENT, COSTS, AND EVALUATION
IV. EQUIPMENT, COSTS, AND EVALUATION

1. EQUIPMENT

RCA 501  The computer is owned by the Army and is used for student instruction and for running simulation programs. The average operation is 1 or 1-1/2 shifts per day. The Exchange system uses about eight hours per week.

501 with 32K memory
6 581 tape drives
533 line printer
paper tape reader
card reader (600 cpm)

COBOL-61, 501 Assembly System, E2 Code--a Micro-Assembly System, and 501 Batch Sorter--a Sort Generator are also used by the Exchange.

2. COSTS AND TIME

The original system was programmed in approximately four months using 80 percent of one man's time. Since then between one and two man-months per year have been expended for improvements; two people for nine months were involved in conversion from a prototype system using IBM equipment to the present system which utilizes a RCA 501 computer. Computer support was assured by assigning a manpower space to the computer section. Planning, system design,
and conversion costs were approximately one to two man-years. Current total annual operating cost is $77,000. The three analysts index and abstract some 60 to 70 items per month, including new documents, status reports on current contracts, changes of address, assignment of AD numbers, etc. Twenty-four hours of each analyst's time per week is spent in retrievals and reference questions and review of demand bibliography printouts.

The Master History File, containing some 6,000 items, is searched in about five minutes. Each query formulation, coding, punching, and processing of a literature search question is normally completed within a 24-hour period.

The Quarterly Supplement printout of some 375 entries takes about 1 to 1-1/4 hours.

3. FACILITY'S EVALUATION OF SYSTEM

A survey of patrons was conducted in 1963, and results indicated that service was good. Ideas received from this first survey were incorporated into plans for the Exchange. Surveys will be continued every few years to obtain suggestions for improvement.
APPENDIX A

ORGANIZATION CHART
APPENDIX B

SAMPLES OF OUTPUTS
COMPUTER IMPLEMENTATION OF A TIME-PHASED INPUT-OUTPUT ECONOMIC MODEL
PEAM-1103A

REFERENCE: RAC-SP-192
LD 5590D
CONTRACTOR: RESEARCH ANALYSIS CORPORATION
TIME FRAME: CURRENT TYPE OF DOC: CONTRACT STUDY NO. OF PAGES: 53
STATUS: COMPLETED SECURITY CLASS: UNCLASSIFIED DATE PUBLISHED: 2/63

(UNCLASSIFIED) THIS STUDY DESCRIBES THE PAMUSA ECONOMIC ACTIVITY
MODEL (PEAM) WHICH WAS DEVELOPED FOR THE RESOURCE-ALLOCATION ANALYSIS PART
OF THE ARMY CHIEF OF STAFF STUDY, "POST ATTACK MOBILIZATION OF THE U. S.
ARMY - 1963 (PAMUSA-63)." IT WAS USED AS AN AID IN EVALUATING THE ABILITY
OF THE ECONOMY TO FURNISH, AT THE APPROPRIATE TIME, THE MEN AND MATERIEL
REQUIRED TO SUPPORT AN ARMY MOBILIZATION AND DEPLOYMENT SCHEDULE BY
QUARTERS, OVER A TWO-YEAR PERIOD. THIS REPORT IS PART OF THE WORK PROGRAM
UNDER RAC PROJECT 83.2 (ARMY MOBILIZATION AND ECONOMIC READINESS MODEL).

SUBJECT DESCRIPTORS:
RESOURCES, CONTROL, MOBILIZATION

REPAIR PARTS MAINTENANCE REQUIREMENTS FOR FUTURE COMBAT OPERATIONS (U).

REFERENCE: RAC-RP-105
LD 5592
CONTRACTOR: RESEARCH ANALYSIS CORPORATION
TIME FRAME: CURRENT TYPE OF DOC: CONTRACT STUDY EXP COMPL DATE: 6/63
STATUS: IN-PROCESS SECURITY CLASS: UNKNOWN

(UNCLASSIFIED) THE OBJECTIVE OF THIS EFFORT IS TO ESTABLISH THE PER-
FORMANCE CRITERIA THAT THE MAINTENANCE REPAIR PARTS SYSTEM MUST MEET TO
Relative Index

PERATIONS, ANALYSIS, INDUSTRIAL OPERATIONS, SIMULATION MODELS, OPERATIONS RESEARCH
40325 05937

PERATIONS, ANALYSIS, LOGISTICS SUPPORT, SIMULATION MODELS, OPERATIONS RESEARCH
33430 05682

PERATIONS, ANALYSIS, METHODS, RESEARCH INFORMATION, SYSTEMS ANALYSIS
78812 05994

PERATIONS, ANALYSIS, MOBILITY, LOGISTICS SYSTEMS, PROJECT AGILE
00350 06463

PERATIONS, ANALYSIS, MOBILITY, PROGRESS REPORTS, PROJECT AGILE
00330 06463E 00350 06463F

PERATIONS, ANALYSIS, MODELS, WAR GAMES, AUTOMATION
10600 04301

PERATIONS, ANALYSIS, NATIONAL POLICY, MILITARY REQUIREMENTS, NATIONAL SECURITY
05050 05990

PERATIONS, ANALYSIS, RESEARCH PROGRAMS, DEPARTMENT OF DEFENSE, OPERATIONS RESEARCH
05050 00635

PERATIONS, ANALYSIS, RESEARCH PROGRAMS, INTERNATIONAL POLICIES, NATO
05050 05643

PERATIONS, ANALYSIS, SCHEDULING, MATHEMATICAL MODELS, OPERATIONS RESEARCH
32400 07135

PERATIONS, ANALYSIS, SIMULATION MODELS, RELIABILITY, QUALITY CONTROL
77512 06323

PERATIONS, ANALYSIS, SIMULATION TECHNIQUES, MATHEMATICAL ANALYSIS, OPERATIONS RESEARCH
32400 06446

PERATIONS, ANALYSIS, SIMULATION TECHNIQUES, MODELS, OPERATIONS RESEARCH
34450 06442

PERATIONS, ANALYSIS, SIMULATION TECHNIQUES, RESEARCH METHODS, OPERATIONS RESEARCH
75512 05923
## Author/Sponsor Code Listing

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Location</th>
<th>Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>00000</td>
<td>OFFICE OF THE SECRETARY OF DEFENSE, WASHINGTON, D.C.</td>
<td>20301</td>
<td></td>
</tr>
<tr>
<td>00300</td>
<td>OFFICE OF SCIENCE, OFFICE OF THE DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING</td>
<td>WASHINGTON, D.C.</td>
<td></td>
</tr>
<tr>
<td>00350</td>
<td>ADVANCED RESEARCH PROJECTS AGENCY, OFFICE OF THE DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING</td>
<td>WASHINGTON, D.C.</td>
<td>20301</td>
</tr>
<tr>
<td>00500</td>
<td>OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (COMPTROLLER)</td>
<td>WASHINGTON, D.C.</td>
<td>20301</td>
</tr>
<tr>
<td>00600</td>
<td>OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS)</td>
<td>WASHINGTON, D.C.</td>
<td>20301</td>
</tr>
<tr>
<td>00700</td>
<td>OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (INTERNATIONAL SECURITY AFFAIRS)</td>
<td>WASHINGTON, D.C.</td>
<td>20301</td>
</tr>
<tr>
<td>01000</td>
<td>THE JOINT CHIEFS OF STAFF, WASHINGTON, D.C.</td>
<td>20301</td>
<td></td>
</tr>
<tr>
<td>01400</td>
<td>US STRICOM, McDILL AIR FORCE BASE, FLA.</td>
<td>33608</td>
<td></td>
</tr>
<tr>
<td>01500</td>
<td>DEFENSE ATOMIC SUPPORT AGENCY, WASHINGTON, D.C.</td>
<td>20301</td>
<td></td>
</tr>
<tr>
<td>02500</td>
<td>DEFENSE INTELLIGENCE AGENCY, WASHINGTON, D.C.</td>
<td>20301</td>
<td></td>
</tr>
<tr>
<td>04500</td>
<td>PERT ORIENTATION AND TRAINING CENTER</td>
<td>1111 20TH ST. NW, WASHINGTON, D.C.</td>
<td>20333</td>
</tr>
<tr>
<td>05000</td>
<td>ARMED FORCES STAFF COLLEGE, NORFOLK, VA.</td>
<td>23511</td>
<td></td>
</tr>
<tr>
<td>05050</td>
<td>INDUSTRIAL COLLEGE OF THE ARMED FORCES</td>
<td>FORT LESLIE J. McNAIR, WASHINGTON, D.C.</td>
<td>20315</td>
</tr>
<tr>
<td>00000</td>
<td>OFFICE OF THE SECRETARY OF THE ARMY, WASHINGTON, D.C.</td>
<td>20310</td>
<td></td>
</tr>
<tr>
<td>10095</td>
<td>OFFICE OF THE DIRECTOR OF CIVIL DEFENSE, WASHINGTON, D.C.</td>
<td>20310</td>
<td></td>
</tr>
<tr>
<td>10295</td>
<td>NUCLEAR BOMB DAMAGE STEERING GROUP (AD HOC COMMITTEE), WASHINGTON, D.C.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03000</td>
<td>OFFICE OF THE CHIEF OF STAFF, US ARMY, WASHINGTON, D.C.</td>
<td>20310</td>
<td></td>
</tr>
<tr>
<td>03600</td>
<td>US ARMY RADIO PROPAGATION AGENCY, FORT MONMOUTH, N.J.</td>
<td>07703</td>
<td></td>
</tr>
<tr>
<td>10300</td>
<td>OFFICE OF THE CHIEF OF STAFF, DIRECTOR OF COORDINATION AND ANALYSIS US ARMY, WASHINGTON, D.C.</td>
<td>20301</td>
<td></td>
</tr>
<tr>
<td>10399</td>
<td>OFFICE OF THE CHIEF OF STAFF, ARMY SPECIAL WORKING GROUP US ARMY, WASHINGTON, D.C.</td>
<td>20301</td>
<td></td>
</tr>
<tr>
<td>10500</td>
<td>OFFICE OF THE ASSISTANT CHIEF OF STAFF FOR INTELLIGENCE WASHINGTON, D.C.</td>
<td>20310</td>
<td></td>
</tr>
<tr>
<td>10600</td>
<td>OFFICE, CHIEF OF RESEARCH AND DEVELOPMENT, WASHINGTON, D.C.</td>
<td>20310</td>
<td></td>
</tr>
</tbody>
</table>
An RCA 501 computer is used by the Defense Logistics Studies Information Exchange to produce a thesaurus, demand bibliographies, code listings, and the Annual Department of Defense Bibliography of Logistics Studies and Related Documents. A card catalog file is maintained but will probably be discarded within 5 to 10 years. The Exchange has applied for status as a DoD Information Analysis Center; it has also been assigned an additional mission of maintaining a DoD Inventory of Technical Data and Related Efforts. Development of the thesaurus will continue, and the Annual Bibliographies and Quarterly Supplements will be printed by GPO from data on magnetic tape as soon as equipment becomes available at GPO. A survey conducted in 1963 indicated that patrons were satisfied with the services provided by the Exchange.
Digital Computers
Information Retrieval
Bibliographies
Data

INSTRUCTIONS

1. ORIGINATING ACTIVITY: Enter the name and address
of the institution, sub-institution, group, department, etc.,
where the document was prepared or approved.

2. REPORT SECURITY CLASSIFICATION: Enter the
overall security classification of the report. Include whether
"Confidential," "Secret," or "Top Secret" is included. Marking
is to be in accordance with appropriate security regulations.

3. DISTRIBUTION STATEMENT: Enter the
information as specified in DIA C 500-100, "Classified
Distribution Statements." Include the group number. Also,
when appropriate, show that approval is required by the
Government and through the chain of command.

4. REPORT TITLE: Enter the complete report title in all
capital letters. Titles in all cases should be unclassified.
If the complete title cannot be without classified
information, state title and information in all capitals or
parentheses, enclosed in the title.

5. DEPARTMENTAL CODE: Enter the type of
report, e.g., status, progress, summary, annual, or final.
Also, enter the volume number when a specific reporting
period is covered.

6. AUTHORS: Enter the names of the authors as shown
on the report. Enter last name, first name, middle initial.
List authors, show rank and branch of service. The name
of the system, if there is an absolute maximum requirement.

7. REPORT DATE: Enter the date of the report as
day, month, year, or month, year. If more than one date
appears in the report, use date of publication.

8. TOTAL NUMBER OF PAGES: The total number
includes all pages except the cover page. Also, enter the
number of pages containing information.

9. NUMBER OF REFERENCES: From the number
of references cited in the report.

10. CONTRACT OR GRANT NUMBER: If applicable, enter
the applicable number of the contract or grant under
which the report was written.

11. AGENCY OR PROJECT NUMBER: Enter the
appropriate number for the department identification,
such as project number, contract number, system numbers, task number, etc.

12. ORIGINATING REPORT NUMBER: Enter the
official report number by which the document will be
identified and controlled in the originating activity. This
number must be followed by the text report number.

13. NUMBER OF FIGURES: If the report has been
previously issued, report numbers (either the originating
number or the system number) also enter these numbers.

14. AVAILABILITY LIMITATION NOTICES: Enter any
limitations on further dissemination of the report, other than those
imposed by security classification, using standard statements
such as:

- "Qualified requesters may obtain copies of this
  report from DIA.
- "Qualified requesters may obtain copies of this
  report from DIA, or from
- "Foreign government and domestic contractors are authorized.

15. "U.S. military agencies may obtain copies of this
report directly from DIA. Other qualified agencies shall request through

- "All distribution of this report is controlled. Qualified
  DOD agency shall request through

If the report has been published in the Office of Technical
Services, U.S. Government Printing Office, for sale to the public,
please list the price and enter the price.

16. SUPPLEMENTARY NOTES: Any additional explanatory
notes.

17. Sponsoring Military Activity: Enter the name of
the departmental point of contact or laboratory sponsoring
research and development. Include address.

18. ABSTRACT: Enter an abstract giving a brief and full
summary of the document in the table of contents of the report. Although
it may also appear elsewhere in the body of the technical report.
If additional space is required, a continuation sheet shall be
attached.

It is highly desirable that the abstract of classified reports
be unclassified. Each paragraph of the abstract shall end with
an indication of the military security classification of the
information in the paragraph expressed as MAJORITY

There is no limitation on the length of the abstract. However,
the space is limited to 195 to 225 words.

19. KEY WORDS: Key words are technologically significant
items in short phrases that characterize a report and may be used as
index entries for cataloging the report. Key words must be
identified so that an accurate, classified search is possible. Lists
such as equipment model designation, trade name, military
property code name, geographic location, may be used as key
words but will be followed by an indication of technical context.
The assignment of indices, titles, and weights are optional.

Security Classification

BEST AVAILABLE COPY