



Computer Data Systems, Inc.

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January 18, 1982

Agency for International Development
S&T/DIU
Room 509, SA 14
Washington, D.C. 20523

Attention: David G. Donovan, Project Officer

Subject: Systems Design and Modification Report for A.I.D./Document
and Information Handling Facility Contract No. DAN-0232-C-
00-1088-00.

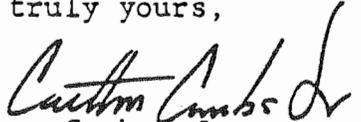
Dear Mr. Donovan:

As requested, we are forwarding the subject report which contains our current best thinking and plans for DIHF systems and operations. This report is intended to serve as the basis for the DIHF Operations Manual as well, so we seek A.I.D. reaction in terms of substantive programmatic and policy considerations. In view of DIHF's scope, we want to be assured that our ideas are consonant both with A.I.D. expectations and policies.

Procedurally, we ask that comments be channeled through you and, after A.I.D. personnel have had a chance to review the report, that a series of small group meetings be held to discuss any problem areas and to reach appropriate understandings so that changes can be incorporated into our operations. We would like to have this process completed by no later than February 5, 1982 if possible.

We will stand ready to meet with you or any other A.I.D. personnel to discuss the report and look forward to the continuing evolution of this important activity.

Very truly yours,


Carlton Combs, Jr.
Project Director/Officer-in-Charge

Enclosure

CC:jw

**System Design and
Modification Report for
A.I.D. Document and
Information Handling Facility**

Submitted to:

Agency for International Development
Office of Development Information
and Utilization

In partial fulfillment of
reporting requirements specified in
Contract No. DAN-0232-C-00-1088-00

January 15, 1982

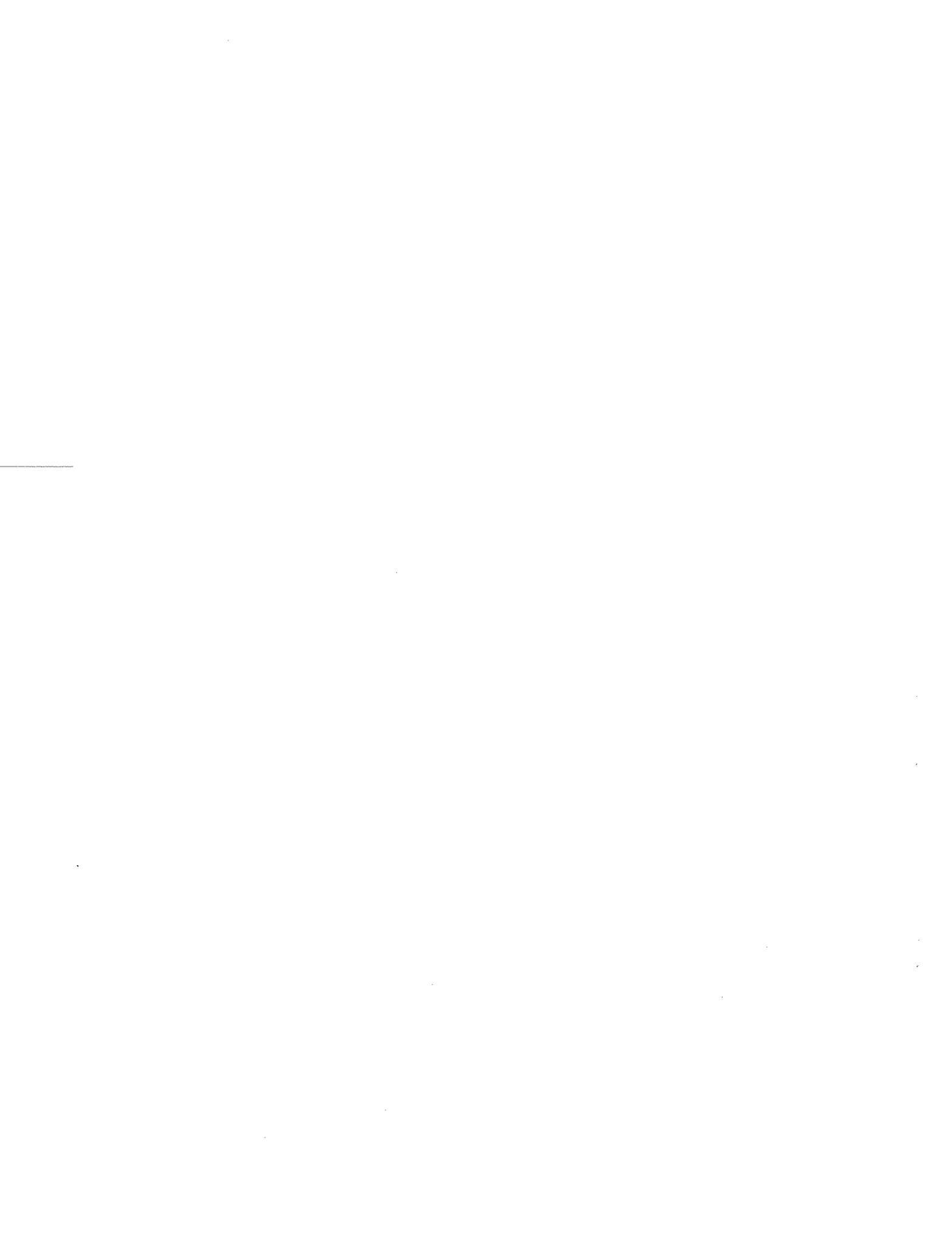


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I. A.I.D. DOCUMENT AND INFORMATION HANDLING FACILITY SYSTEM CONCEPT

A. Introduction.

Over a number of years, the Agency for International Development (A.I.D.) has evolved an information systems support activity that has relied on the use of a number of contractors to perform various interrelated acquisitions, processing, and dissemination functions. While this approach achieved the objectives desired at the time the work was contracted, an integrated, systematic information support activity was absent.

With the award of contract No. DAN-232-C-00-1088-00 to Computer Data Systems, Inc., in September, 1981, the opportunity now exists to develop a cohesive program that ties together various information support functions. CDSI, in conjunction with its two main subcontractors and other vendors, has established a dedicated facility in Bethesda, Maryland that:

1. brings together A.I.D. acquisitions, processing and dissemination function in a consolidated operation;

2. houses the equipment, personnel, documents and materials needed to perform the function required to service A.I.D.'s user community;

3. reflects innovative procedures that correspond to improved systems technology and which take into account the projected growth and dynamic aspects of DIU's mission.

As stipulated in Section 6.1 and 6.2 of the DIHF contract Scope of Work, CDSI is required to prepare a systems design and modification report, accompanied by an implementation plan, that

defines how and when the facility's systems will be made operational. This report is submitted as partial fulfillment of that requirement.

No discussion of Phase III activities is presented in this report, but consideration of such requirements has been foremost in our planning. The systems, as well as procedural and practical aspects of implementing them in LDC's or in A.I.D. missions (which currently use different hardware/software configurations) have been taken into account to the maximum extent possible as our design concepts have evolved.

In preparing this report, we have considered the "system" to be the combined systems and procedures [that govern the Facility's operations] -- not merely the hardware and software configurations that we envision will serve as facility support tools.

Each chapter of the report reflects a functional element of the DIHF operation as presented below:

- o Acquisitions.
 - A.I.D. Documents (including technical reports, project documents, etc.);
 - Periodicals/Serials;
 - Books;
- o Thesaurus development;
- o Non-Subject Authority Files;
- o Document Processing;
- o Minicomputer and Data Base Management System;
- o Micropublishing;
- o Mailing List Maintenance;
- o Publications Development;
- o Request Fulfillment;
- o Document Mailing/Distribution;
- o Facility Management and Evaluation.

B. User Requirements.

In preparing this report, a preliminary analysis of user requirements was performed. Our approach involved:

- o Review of A.I.D. background materials;
- o Interviews with selected A.I.D. personnel;
- o Discussions with contractors/vendors responsible for performing sub-function activities now covered by this contract.

Our efforts have also been guided primarily by the stated preferences of A.I.D./DIU staff to have the DIHF become operational with a service delivery capacity AS EARLY AS POSSIBLE.

No formalized needs assessment was performed in view of the requirement to obtain OMB clearance for data collection instruments; and, overseas user needs have been reflected primarily through the viewpoints, experiences and opinions of A.I.D. personnel and others with field experience or who are knowledgeable of such requirements.

Our plans call for preliminary assessments of Phase III requirements after this report is submitted and specific system characteristics are adopted. This preliminary assessment will refine further our understanding of LDC and A.I.D. mission needs.

Our approach to satisfying user needs has been to:

- o Determine those activities that are required to support A.I.D.'s mission;
- o Develop response capabilities to meet these requirements;
- o Determine those activities required to meet A.I.D.'s constituencies' needs;
- o Relate proposed systems and procedures to existing operations;
- o Determine those functions that will continue essentially unchanged;

- o Plan for the modification of existing and integration of new systems/procedures to support projected requirements.

As a result, our efforts to date have concentrated on providing technical support to A.I.D./W, especially DIU, with corollary emphasis on integrating our service delivery capacity to respond to external requests for materials in fiche or hard copy forms; and, lastly, to make changes in basic systems operations placing lowest priority on revising or replacing those functions that are operating at accepted levels of performance.

Exhibit I-1 summarizes our user needs analysis in tabular form. This table characterizes our understanding of the principal categories of users and the types and levels of service expected from the DIHF.

Exhibit I-2 illustrates our understanding of internal A.I.D. support service requirements on which we have placed special significance in both our current efforts and design considerations.

User Services Analysis

DOCUMENT REQUEST FULFILLMENT				REFERENCE SERVICE						DATA BASE EXCHANGE			SDI SERVICE			DATA BASE MANAGEMENT REPORTS							
PRINTED ORIGINALS		FICHE BLOWBACK		FICHE DUPLICATION		WALK-IN		MANUAL SEARCH		ON-LINE DATA BASE SEARCH			DATA BASE EXCHANGE			SDI SERVICE			DATA BASE MANAGEMENT REPORTS				
C	F	V	C	F	V	C	F	V	C	F	V	C	F	V	C	F	V	C	F	V	C	F	V
1	A	Δ	1	A	Δ	1	A	Δ	2	A	*	1	B	■	1	B	*	2	B	*	2	B	♦
1	A	■	1	A	Δ	1	A	*	1	A	*	1	A	*	1	B	*	2	B	*	2	B	♦
1	A	■	1	A	Δ	1	A	*	1	A	*	1	A	*	1	A	*	1	A	*	1	A	■
1	A	♦	1	A	Δ	1	A	♦	1	C	*	1	B	*	1	B	*	2	C	*	2	C	♦
2	B	♦	2	B	Δ	2	B	♦	2	C	*	1	C	*	3	*	*	2	C	*	2	C	*
1	A	♦	1	A	Δ	1	A	♦	1	A	*	1	A	*	1	C	*	1	C	*	2	C	♦
1	A	♦	1	A	Δ	1	A	♦	2	C	*	2	C	*	2	C	*	2	C	*	2	C	*
2	B	♦	2	B	Δ	2	B	♦	2	C	*	2	C	*	2	C	*	2	C	*	2	C	*
1	A	♦	1	A	Δ	1	A	♦	1	A	*	1	A	*	2	C	*	2	C	*	1	C	♦
3	B	♦	3	B	Δ	3	B	♦	3	C	*	2	C	*	2	C	*	3	C	*	2	C	♦
2	B	♦	2	B	Δ	2	B	♦	2	C	*	2	C	*	2	C	*	2	C	*	3	C	*
2	C	Δ	2	C	Δ	2	C	♦	3	C	*	2	C	*	2	C	*	2	C	*	3	C	*
2	C	♦	2	C	Δ	2	C	♦	3	C	*	2	C	*	2	C	*	2	C	*	3	C	*
2	A	♦	2	A	Δ	2	A	♦	2	C	*	2	A	*	2	C	*	2	C	*	2	B	♦
3	B	Δ	3	B	Δ	3	B	♦	3	C	*	2	C	*	3	C	*	3	C	*	3	C	*
3	C	Δ	3	C	Δ	3	C	♦	3	C	*	2	C	*	3	C	*	3	C	*	3	C	*

C Category of User
 = Primary/High Priority
 = Secondary
 = Tertiary
 = Not Applicable

F Use Frequency
 A = Frequent (Daily/Weekly)
 B = Regular/Periodic (Monthly)
 C = Occasional
 * = Not Applicable

V Quantities/Volumes
 ■ = Everything
 ♦ = Everything in a Series/Category
 Δ = Individual Items Only
 * = Not Applicable

I Support Service Requirements

	MATERIALS STORAGE				PUBLICATIONS DEVELOPMENT	MAILING LABELS	DISTRIBUTION SERVICES			MICROPUBLISHING		
	BOOK SHELVING / CIRCULATION	ONLINE DATA BASE	HARD COPY / WAREHOUSE	FIGHE			INVENTORY CONTROL	INTERNAL	EXTERNAL	FIGHE DUPLICATION	PAPERBACK	MANAGEMENT REPORTS
•	U. 1. 0	C. 3. 0	U. 1. 0	U. 2. 0	U. 2. 0	U. 2. 0	U. 1. 0	U. 1. 0	U. 1. 0	U. 1. 0	U. 1. 0	U. 1. 0
0	C/U. 1. 0	C/U. 1. 0	C/U. 1. 0	C/U. 1. 0	C/U. 1. 0	C/U. 1. 0	U. 1. 0	U. 1. 0	U. 1. 0	U. 1. 0	U. 1. 0	U. 1. 0
0	C/U. 1. 0	C/U. 1. 0	C/U. 1. 0	C/U. 1. 0	C/U. 1. 0	C/U. 1. 0	U. 1. 0	U. 1. 0	U. 1. 0	U. 1. 0	U. 1. 0	U. 1. 0
•	U. 1. 0	U. 2. 0	C. 2. 0	U. 2. 0	•	U. 2. 0	•	•	U. 2. 0	•	•	•
•	U. 1. 0	U. 1. 0	C. 2. 0	U. 2. 0	•	U. 2. 0	•	•	U. 2. 0	•	•	•
•	U. 1. 0	U. 2. 0	C. 2. 0	U. 2. 0	•	U. 2. 0	•	•	U. 2. 0	•	•	•
•	U. 2. 0	U. 2. 0	C. 2. 0	U. 2. 0	•	U. 2. 0	•	•	U. 2. 0	•	•	•
•	C/U. 1. 0	U. 3. 0	C. 2. 0	U. 2. 0	•	U. 2. 0	•	•	U. 2. 0	•	•	U. 1. 0
•	U. 1. 0	U. 1. 0	C. 2. 0	U. 2. 0	U. 2. 0	U. 2. 0	•	•	U. 2. 0	•	•	•
•	U. 2. 0	U. 2. 0	C. 1. 0	U. 2. 0	•	U. 2. 0	•	•	U. 2. 0	•	•	•
•	U. 2. 0	U. 2. 0	C. 1. 0	U. 2. 0	•	U. 2. 0	•	•	U. 2. 0	•	•	•
•	U. 2. 0	U. 2. 0	C. 1. 0	U. 2. 0	•	U. 2. 0	•	•	U. 2. 0	•	•	•
•	U. 2. 0	U. 2. 0	C. 1. 0	U. 2. 0	•	U. 2. 0	•	•	U. 2. 0	•	•	•
•	U. 1. 0	U. 1. 0	C. 1. 0	U. 1. 0	•	U. 3. 0	•	•	U. 1. 0	•	•	•

DIU/DIHF

Relationship Status

• Current Active Relationship

0 Frequent Interaction

• Projected Relationship

• Not Applicable

POTENTIAL DIHF USERS
LDC Organizations/Individuals
A.I.D. Missions
A.I.D./W. Offices Designers/Evaluators
Peace Corps
U.S. Land Grant Universities
U.S. Government Agencies
Foreign Universities
Developed Country Organizations
ICA (nee USIA)
P.V.O. (Private Voluntary Organizations)
U.S. Private Industry
Laboratories
Hospitals
International Organizations
Research Institutes
Professional Associations

C. Special System Policy Considerations.

In selecting CDSI and its proposed approach for operating the DIHF, we have assumed A.I.D.'s tacit commitment to the HP 3000/MINISIS configuration for hardware/systems support of the facility's operations. We have also assumed that A.I.D.'s concern to improve and enhance user services is of primary importance, and recognition of that fact has been the driving motivation in our deliberations.

During our analyses, however, we have discovered certain levels of systems redundancy and an over-emphasis on internal procedures which we believe have been detrimental to efficient delivery of services. In addition, and of special note, we have discerned a disparate evolution of systems and information programs that have not been clearly focused or integrated. This, coupled with attempts to intermingle technical information with management information to satisfy varying user requirements without benefit of a comprehensive system design, has led to the following: creation of a series of inter-related files, which serve many masters but adversely affect user access and complicate systems maintenance. In some instances, document processing has reached such levels of detail that often a surrogate of the source document has been created in the data base files.

In conceiving our system design, our objective has been to:

- o simplify the processing steps required to analyze and differentiate bibliographic and technical information as distinct from contracts/grants management data;
- o develop a system that will allow users to quickly learn of project information that would be relevant to their needs, thus providing access paths to and improved means

for obtaining copies of the source documents in hard copy of fiche format;

- o integrate service delivery activities for routine and priority requests, placing emphasis on responsiveness;
- o carefully analyze the milieu in which A.I.D. information activities have evolved, and consider the practical, political, and administrative constraints that delimit our ability to optimize system operation (such as commitments to OCLC; role in Federal Library community; interfaces with extant library/system operations; and variations in existing-vs-planned international information operations.);
- o use existing channels of information exchange to the maximum extent possible to improve flow/exchange of development information between and among LDC's, PVO's, sponsoring organizations and contractors by such means as satellite communications networks, micropublishing, and accepted international information exchange protocols.

In selecting MINISIS as the software support tool, a corollary commitment by A.I.D. to its philosophical approach to information processing is also essential. Key points in this commitment include the facts that:

- o MINISIS and its incorporation of the UNESCO Macrothesaurus is at variance with OCLC and other established U.S. Federal library and other international cataloging terminologies.
- o MINISIS operates on HP 3000 equipment exclusively; and,
- o MINISIS requires a different conceptualization of information processing.

It has been our understanding that the A.I.D./DIHF is to be a central focal point for A.I.D. development information activities to serve:

- o LDC's and A.I.D. missions overseas;
- o A.I.D./Washington;
- o Contractors/Grantees who are involved in development work; and
- o Other international organizations.

Given these priorities, then, our approach has been to look to the future and develop methodologies and systems that fit within the mainstream of information processing at the international level while continuing to serve A.I.D.'s internal needs. To do otherwise is to afflict the operation from the outset. However, this approach runs counter to certain existing policies and procedures on which existing DIU information programs are based:

- (1) Need for DIHF to be responsive to internal - vs - external users.
- (2) Need to conform to Federal library exchange procedures when so little of A.I.D.'s work is involved.
- (3) Value of information as a national resource that should be treated as any other commodity.
- (4) Overlaps with other information activities such as those sponsored by NTIS.

In this report, we present our recommendations based upon current facts which we acknowledge have only been developed in the last two months and which may not reflect a thorough familiarity with of all of A.I.D.'s activities. We realize that some of our assumptions and recommendations may be based upon incomplete or misinterpreted information. It is our purpose, however, for this report to serve as the basis for continued dialogue so that our subsequent activities will be continuing improvements in the operation of the facility.

D. System Overview.

Exhibit I-3 graphically illustrates our proposed overview of the system.

To assist the reader, Exhibit I-4 is presented to explain the charting techniques that are used in graphically describing the system.

Appendix A contains a glossary of terms that will further assist the reader in understanding the concepts used in presenting our design recommendations. These terms reflect usage in both the HP 3000 and the MINISIS user community. Exhibits I-5, -6, -7 further describe the process and flow of information in the three major areas of facility operations:

- o Materials Acquisition and Processing
- o User Request Processing
- o Dissemination and Distribution of Materials.

Exhibit I-8 illustrates the relational aspects of the data bases within the system. The system will consist of a series of data bases that are described as follows. In certain cases, the proposed data base structures and access paths have been provided. These are suggestions only and will serve as the basis for future discussion.

1. Documents Data Base (RD). Relation Definition will contain all the fields found in the PS's (Project Subsets) of the Document Data Base and the Inventory Control Data Base. The suggested access paths (AP) indicated in the "Probable Data Base Structure" would be fast access files as specified in the data base definition. (See Exhibit II-11 in Section II.F.d).

Exhibit I-3
System Overview

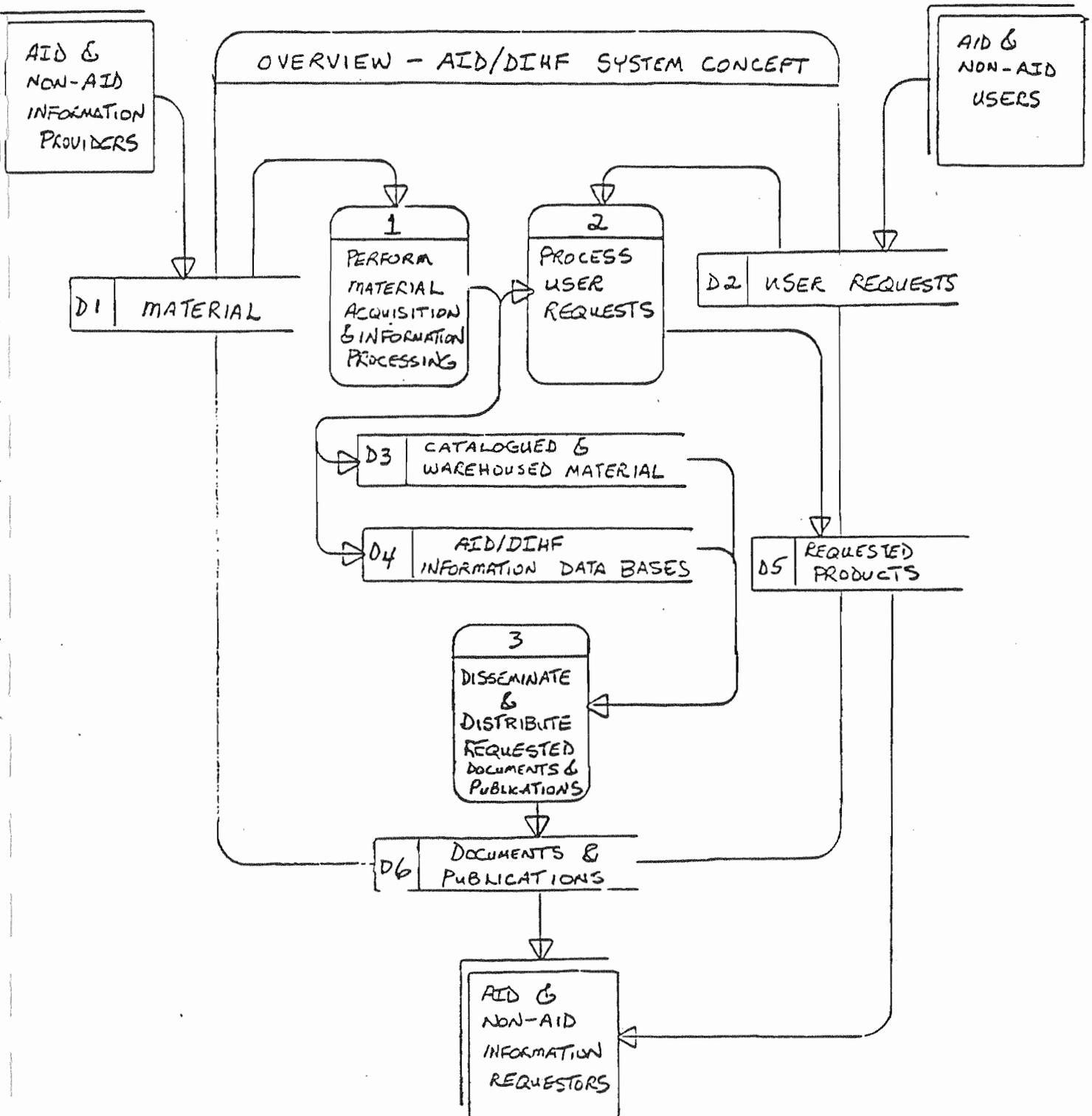
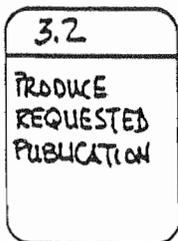
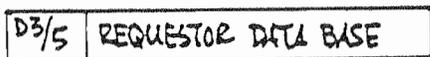


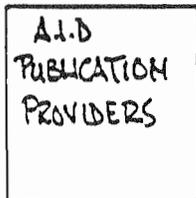
Exhibit I-4
Charting Techniques for System Description



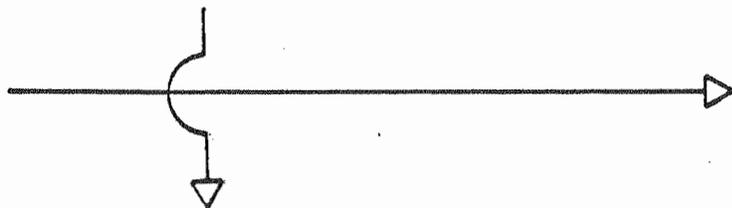
Process



Data Store (Physical or Machine Based)



External Entity



Flow of Process

Flow Showing
Crossover

Exhibit I-5
Materials Acquisition & Processing

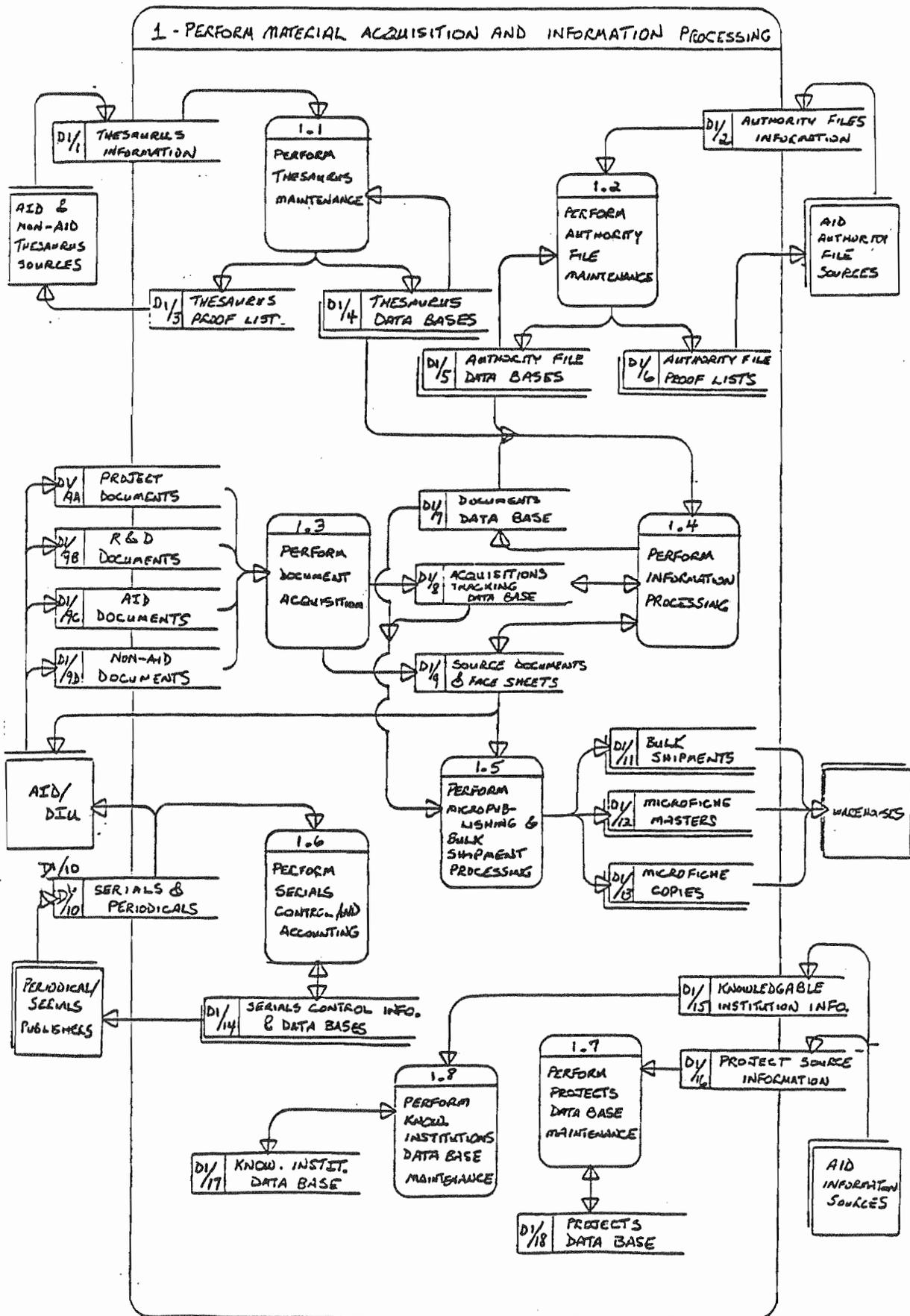


Exhibit I-6
User Request Processing

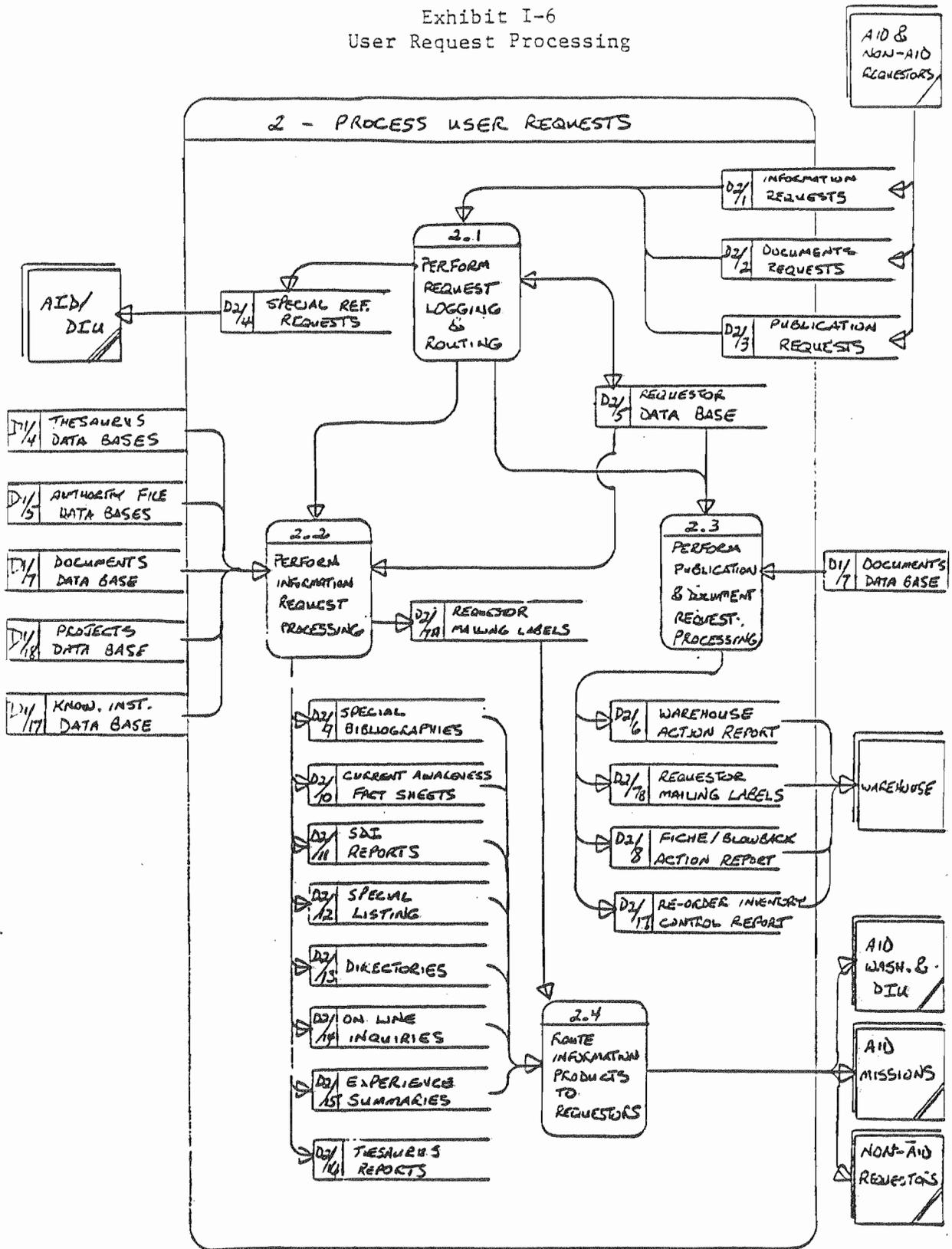


Exhibit I-7
Dissemination & Distribution of Material

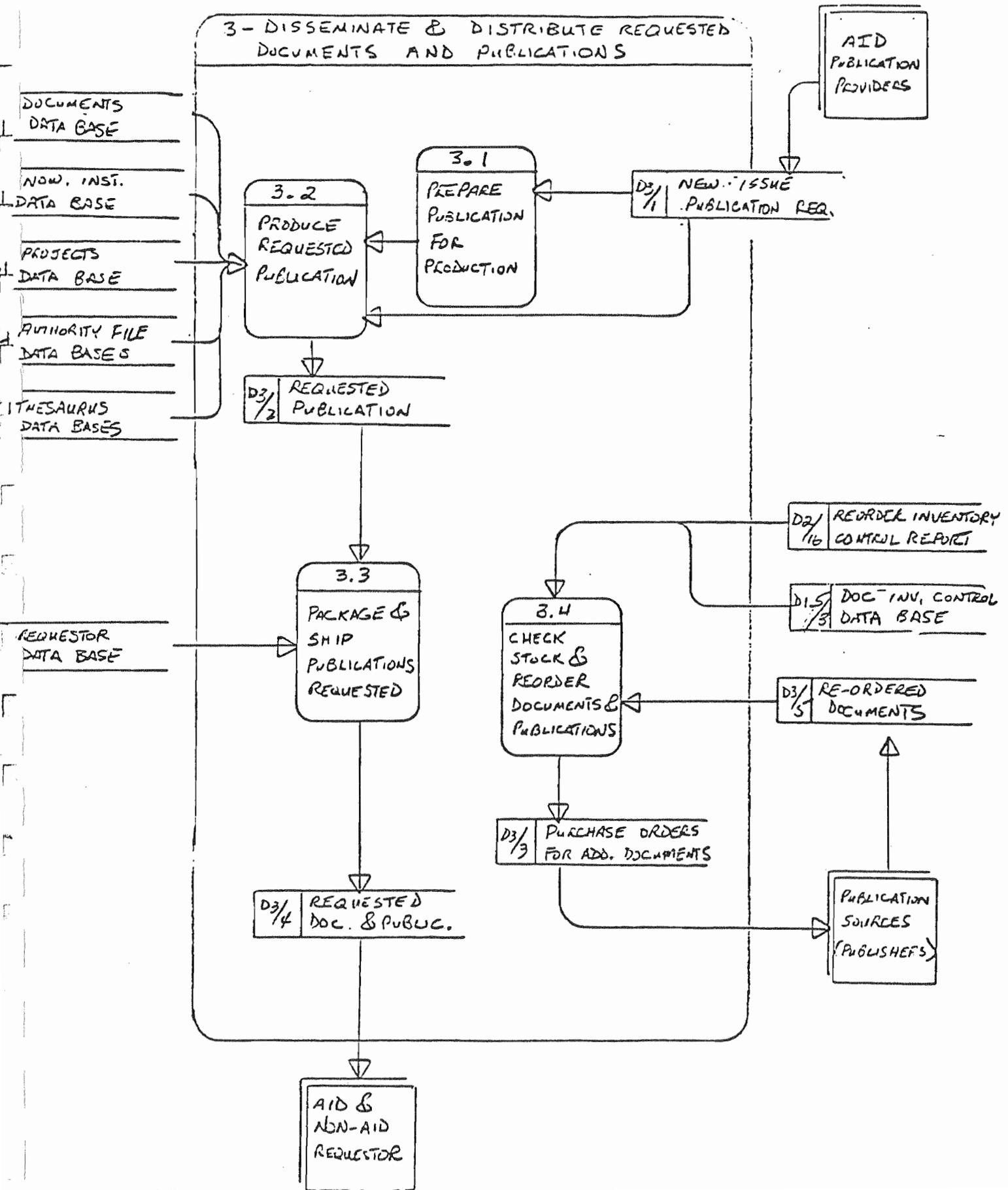
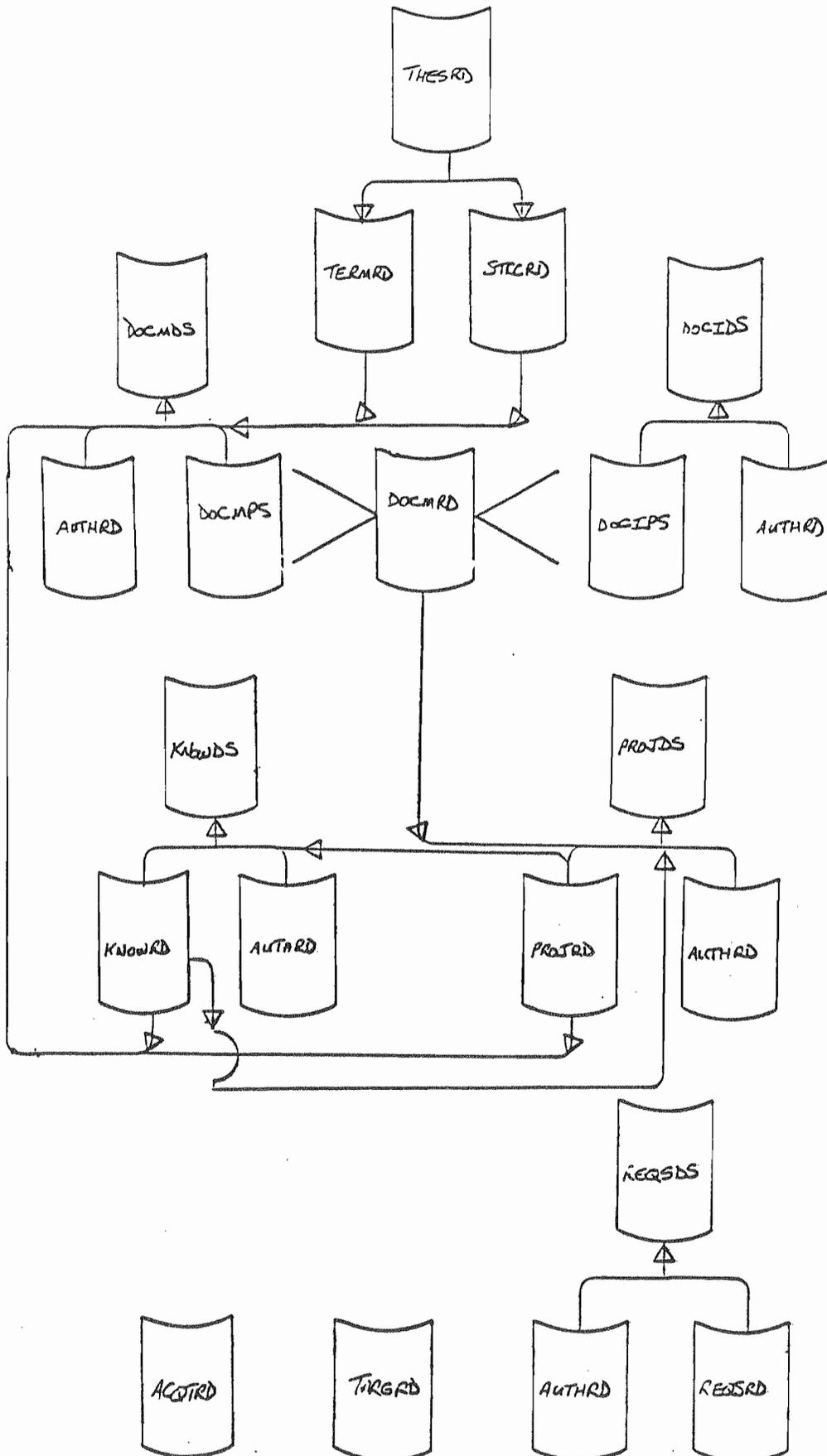


Exhibit I-8
 Relational Aspects of System Data Bases



MINISIS DATA BASE ABBREVIATIONS FOR INTEGRATION DIAGRAM

<u>Abbreviation</u>	<u>Data Base Name</u>
DOCMRD	Documents Data Base (RD)
DOCMPD	Documents Data Base (PS)
DOCMDS	Documents Data Base (DS)
DOCIPS	Documents Inventory Control Data Base (PS)
DOCIDS	Documents Inventory Control Data Base (DS)
PROJRD	Projects Data Base (RD)
PROJDS	Projects Data Base (DS)
KNOWRD	Knowledgeable Institutions Data Base (RD)
KNOWDS	Knowledgeable Institutions Data Base (DS)
REQSRD	Requestor Data Base (RD)
REQSDS	Requestor Data Base (DS)
TARGRD	Target Acquisitions Data Base (RD)
ACQTRD	Acquisitions Tracking Data Base (RD)
AUTHRD	Authority Files (RD)
THESRD	Thesaurus Master (RD)
TERMRD	Thesaurus Terms file (RD)
STRCRD	Thesaurus Structure File (RD)

Legend

RD = Relation Definition

PS = Projected Subset

DS = Data Submodel

2. Documents Data Base (PS). Projected Subset will contain all those fields from the Documents (RD) that are used for cataloging, indexing, abstracting, file maintenance and searching. The Thesaurus Terms and Structure Files will be used to control vocabulary for Index Terms on input, and accommodate true thesaurus retrieval capabilities on inquiry to the Documents Data Base. The Documents Material contained in this data base will be finally located (one copy at least) in the A.I.D. Documentation Center. Additional copies and microfiche are located in the warehouse. Record types included on this data base are:

- a. Project Designs;
- b. Project Audits;
- c. Project Evaluations;
- d. Contractor Reports;
- e. Project Plans;
- f. Research Reports;
- g. Project Documents;
- h. Non-A.I.D. and A.I.D. Publications; and
- i. Serial Analytics.

3. Documents Inventory Control Data Base (PS). Projected Subset will contain all those fields from the Documents (RD) that are used for inventory control, micropublishing processing and warehousing.

Document Inventory Control Data Base

- (AP) o ISN
- (AP) o Document Identification
- (AP) o Document Type and Form
- o Document Status
- (AP) o Audit Control Information (Entry and Update)
- o Actual and Estimated Cost
- o Original Stock On Hand Quantity
- o Present Stock On Hand Quantity
- o Stock On Order Quantity
- o Order Source
- o Date of Expected Arrival
- o Document Title
- o Location, Fiche and Frame Counts

4. Documents Data Base (DS). Data Submodel will join any authority files (decode tables) to the Documents Data Base PS to give the information user a more meaningful view of his/her data base. All codes would be shown in a full description. Knowledgeable Institutions information will be joined to the Documents Data Base so that detailed contractor information will be available for perusal. In addition, the Project Data Base (RD) will be joined to the Documents Data Base (PS) by project number to make project related information available to a user who is searching for projects related to a group of documents he has just selected.

Documents Data Base Structure

- (AP) o ISN
- (AP) o Document Identification
- (AP) o Document Type and Form
- o Document Status
- o Local Call Number
- o Languages of TEXT and Language Publication is available in
- (AP) o Audit Control Information (Entry/Update)
- (AP) o Personal Authors and Affiliations
- (AP) o Corporate Authors and Affiliations
- (AP) o Document Title
- (AP) o Journal Title, Volume, Issue, Pages Cited
- (AP) o Selected Article Title
- o Edition
- o Publisher Name, Place, Country
- o Date of Publication
- (AP) o ISBN
- (AP) o ISSN
- o Conference Name, Place, Date, Country
- o Collation
- o Notes
- o Location (If required)
- o Abstract
- (AP) o Controlled Vocabulary Subject Descriptors
- o Actual and Estimated Cost
- (AP) o Geographical Codes
- (AP) o Bibliographic Type
- o A.I.D. Reference Center Catalogue Number
- o ARDA Publication Date
- o ARDA Item Number
- o ARDS Publication Date
- o GRLD Publication Date

- o A.I.D. Contract Number
- o A.I.D. Contract Type
- o Date of Last Report
- (AP) o Project Number
- o Notes
- o Organization Code and Type

5. Documents Inventory Control Data Base (DS). Data Submodel will join any authority files (decode tables) to the Documents Inventory Control PS to give the full description of any codes contained on the data base.

6. Projects Data Base (RD). Relation definition will contain all fields describing A.I.D. projects throughout the world. Detailed and Summary Information will be available for perusal by the user.

Projects Data Base

- | | |
|-----------------------------------|------------------------------------|
| o Project Number | o AID Sponsoring Office |
| o Project Number - Geographics | o AID Sponsoring Office Address |
| o Project No - Sector | o AID Project Monitor |
| o Project No Basket | o Project Logframe |
| o Related Project Numbers | o Project Logframe Goal |
| o Project Title - DIHF | o Project Logframe Purpose |
| o Project Title - AID | o Project Logframe Input |
| o Project Status | o Project Logframe Output |
| o Project Stage | o Descriptor Terms |
| o Grant/Loan | o Design Document Reference Number |
| o Grant/Loan Indicator | o Document Identification Numbers |
| o Grant Appropriation | o Notes |
| o Grant Funding | |
| o Contract Number | |
| o Contract Type | |
| o Contract Period | |
| o Housing Guarantee Number | |
| o Funding Total | |
| o Fiscal Year | |
| o Principal Investigator | |
| o Investigator Affiliation | |
| o Performing Organization | |
| o Performing Organization Address | |

7. Projects Data Base (DS). Data Submodel will join any authority file descriptions to their codes in the Relation

Definition. In addition the Knowledgeable Institution Data Base will be joined to the Projects Data Base (RD) by Knowledgeable Institute Code to make available for perusal detailed contractor information, as well as through a joining of the Projects Data Base (RD) to the Documents Data Base (PS) by Document Identification, any document cataloged information related to a project.

8. Knowledgeable Institutions Data Base (RD). Relation Definition will contain all fields used to describe a project or contractor or participants in an A.I.D. Project. Institutions with specific skills/project background may be called upon from time to time to fulfill upcoming projects.

Knowledgeable Institutions Data Base

- (AP) o ISN
- (AP) o Knowledgeable Institution Code
- (AP) o Knowledgeable Institution Name
- o Knowledgeable Institution Address Information
- (AP) o Contract Numbers
- (AP) o Project Numbers
- o Abstract of Skills, Project Participation

9. Knowledgeable Institutions Data Base (DS). Data Submodel will join any authority file descriptions to their codes in the Relation Definition. In addition the Project Data Base (RD) will also be joined to the Knowledgeable Institutions (RD) on Project Identification to provide enriched Project Information for each project carried out by a Knowledgeable Institution.

10. Requestor Data Base (RD). Relation Definition will contain all fields related to document mailing and distribution as well as previous requests for information, and the manner in which they were satisfied.

Requestor Data Base

- (AP) o ISN
- (AP) o Requestor Identification
- (AP) o Requestor Name
 - o Requestor Address
 - o Audit Control Information (Entry/Update)
 - o Abstract of Area of Interest
- (AP) o Geographical Code
 - o Language Code
 - o Activity Code
 - o Charging Status
- (AP) o Publication/Subscription Information (Standing Orders)
- (AP) o Requestor Status (Active/Inactive) and Class
 - o Previous Information/Document/Publication Request Information

11. Requestor Data Base (DS). Data Submodel will join required authority file records to codes contained on the RD; and therefore provide descriptive information of each code.

12. Target Acquisitions Data Base (RD). Relation Definition will contain all fields used to keep track of Project Documents to be issued in the future and will assist A.I.D/DIU by prompting the project document sources as soon as a publication date is known.

Target Acquisitions Data Base

- (AP) o ISN
- (AP) o Document Identification
- (AP) o Document Type and Form
 - o Document Status
- (AP) o Document Title
 - o Expected Date of Publication
 - o Audit Control Information (Entry & Update)
- (AP) o Target for Document Acquisition
 - o Date Last Requested
 - o Document Source/Citation
- (AP) o Project Number and Related Project Number
 - o Document Stage of Project Completion
 - o Date Received and Entered to the Documents Data Base
- (AP) o Contract Number

13. Acquisitions Tracking Data Base (RD). Relation Definition will contain data describing the auditing of the acquisition, cataloging, indexing, abstracting, and warehousing functions; and will

be used to report the status of documents received for processing. It will tell when a document is received for processing and where an item is at any time during processing, through links to inventory control and microfiche processing files.

Acquisitions Tracking Data Base

- (AP) o Batch Control Information
- (AP) o Document Control Number, Quantity and Type
 - o Operator Identification
 - o Acquisitions/Processing Status

14. Authority Files (RD). Relation Definition will contain codes and descriptions for data stored on specified master files. This eliminates data redundancy and insures data integrity for values that would be duplicated and of full length in many records of a data base.

Authority Files

- (AP) o Key or Code
 - o Expanded/Decoded Description (optional)
 - o Other Ancillary Fields (optional)

15. Thesaurus Master (RD). Relation Definition will contain all fields used to catalog and retain a controlled vocabulary set. These records will be used to create the Thesaurus Terms and Structure Files through the THLOADER (Thesaurus Loader) MINISIS Processor.

Thesaurus Master

- (AP) o ISN
- (AP) o Main Term
 - o Main Term Facet Number
 - o Broader Terms
 - o Narrower Terms
 - o Related Terms
 - o Any Terms
 - o Forbidden Term
 - o Use Term
 - o Scope Note

Thesaurus Master Structure (cont.)

- o Contributing Organization
- o History Note

16. Thesaurus Terms File (RD). Relation Definition describes the main Entry Terms of the Thesaurus and their concept numbers.

On-line Thesaurus Terms File

- (AP)
- o Main Term (or Forbidden Term)
 - o Concept Number of Main Term (or Concept Number of Use Term)
 - o Concept Number of Facet Number
 - o ISN of Main Term

17. Thesaurus Structure File (RD). Relation Definition describes the concept number of a term, and its relation (broader, narrower, related, etc.) to other concept numbers of terms.

On-line Thesaurus Structure Files

- (AP)
- o Concept Number of Main Term prefixed by type of structure code
 - o Concept Number of Structure Term

E. Approach.

Our approach for developing the system will be based on evolving each component of the operation over established time frames working in close conjunction with A.I.D. personnel. An accompanying report details the implementation timetable we propose. The following descriptions of tasks present our understanding of current activities and how we intend to treat each major area of work.

Of key importance, however, is our desire to avoid taking any steps that could inhibit our ability to provide services; and, to make certain that any system enhancements that require changing or eliminating existing A.I.D. operations would not be done without parallel operations, until A.I.D. was assured a cross-over could occur without loss of system or operational integrity.

Due to the need to follow this approach, our initial recommendation is to emulate the existing data bases on MINISIS until such time that agreement is reached on a revised data file structure. A thorough understanding of any such changes on extant systems becomes clear.

Priority consideration will be given to thesaurus development and DIS file development which will link BREF and TEXT. Second level emphasis will be directed to modifying ADDS and RANDD.

In brief, our approach is summarized as follows:

1. Thesaurus Development.

a. Construction.

- (1) Amalgamation of recommended thesaurus;
- (2) Design of manual/automated model;
- (3) Creation of relationship lists; and
- (4) Testing and trial run of automated system.

b. Maintenance.

- (1) Schedule of phased implementation in each subject area for input;
- (2) Periodic update of automated model and rebuilding on line key and structure files; and
- (3) Audit control.

c. Use.

- (1) On-line retrieval for document data base;
- (2) Hard copy output products; and
- (3) Microform output products.

2. Non-Subject Authority Files.

a. Construction.

- (1) Design MINISIS Authority Files:
 - o File size
 - o Inverted (fast access)
 - o Key
 - o Expanded information
 - o Ancillary fields
- (2) Accumulate file contents; and
- (3) Develop MINISIS relation definitions.

b. Maintenance.

- (1) Input file contents;
- (2) Periodic update of file contents; and
- (3) Audit control.

c. Use.

- (1) Establish data base linkages;
- (2) Periodic test for integrity; and
- (3) Reduce data redundancy in multiple data bases.

3. Periodicals/Serials.

- a. Propose high level design for MINISIS serials issue control; and
- b. Maintain present system until MINISIS subsystem or other serials control system is available.

4. Micropublishing.

- a. Design inventory control;
Design warehousing; and
Design accounting.

- b. Specify data entry/modification procedures;
Specify output products - screen; and
Specify output products - printouts.
5. Projects/Knowledgeable Institutions.
- a. Design projects data base;
 - b. Specify data entry/modification procedures;
Specify output products - Screens
Printouts
Exchange formats.
6. Documents.
- a. Design data base and project subsets by BIBTYPE:
 - (1) Project Document;
 - (2) Project Design;
 - (3) Project Evaluation;
 - (4) Research Reports;
 - (5) Non-A.I.D. Publications;
 - (6) A.I.D. Publications; and
 - (7) Serial Analytics.
 - b. Specify data entry/modification procedures
Specify output products - Screens
Printouts
Exchange formats.
7. Mailing List (ADDS)
- a. Analyze existing system while maintaining it on
A.I.D./DDM Equipment.
 - b. Analyze Research Resources mail list operations for
possible integration.
 - c. Specify system requirements, outputs.
 - d. Relate existing file structure to MINISIS specifications.
 - e. Convert ADDS to MINISIS data base.
 - f. Maintain mailing list.
 - g. Document systems and procedures manual.

II. INFORMATION ACQUISITION AND PROCESSING

For purposes of differentiating the various types of documents and sources, the following two sections of this chapter deal with the acquisition of A.I.D.-generated materials and non-A.I.D. materials.

Exhibit II-1 illustrates the system overview for these aspects of the acquisitions function.

A. Acquisitions of A.I.D. Documents.

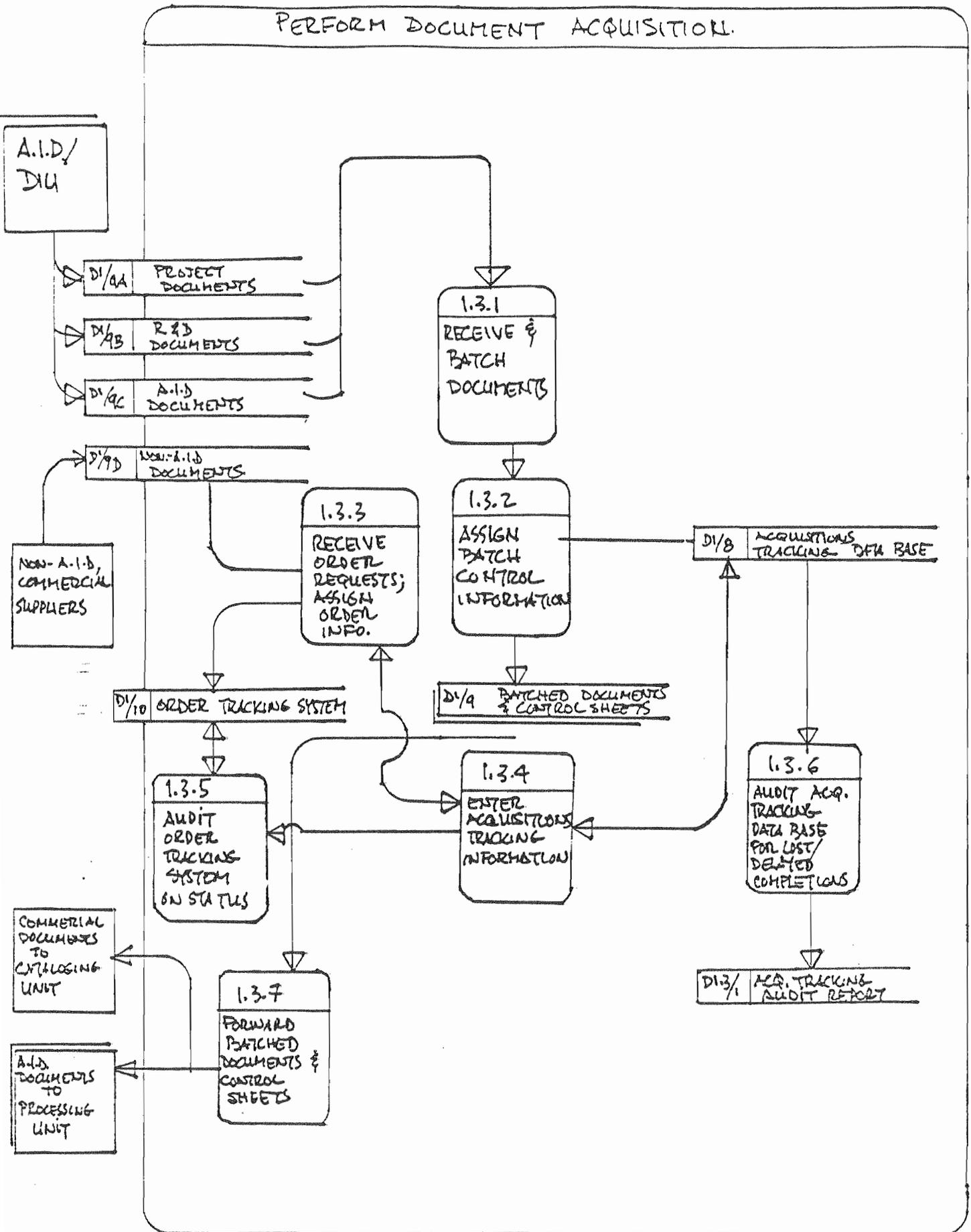
1. Definition/Purpose. Acquisitions for the DIHF will require performance of four main functions:

- a. Identification, collection, and selection of:
 - (1) A.I.D. project and program documentation;
 - (2) A.I.D. evaluations;
 - (3) A.I.D. R&D reports;
 - (4) Non-AID books, serials, monographs, technical documents;
 - (5) Reference materials; and
 - (6) Other international donor organizations' machine-readable tapes.
- b. Establishing a Project and Document Tracking System.
- c. Establishing and maintaining counterpart contacts within A.I.D./W and USAID missions.
- d. Development of information exchange agreements with other international donors.

The purpose of this acquisitions program is to ensure that all documentation necessary to a complete understanding of project design, implementation, evaluation, and termination is available for use.

2. Current Status. The main approaches to document acquisition in DIU are:

Exhibit II-1
Systems Overview for Document Acquisitions



a. Automatic receipt from A.I.D.'s printing and central distribution office of project-related documents. Project-related documents include design, implementation, and evaluation materials.

b. Active search for and recovery of project-related documentation appearing on the Master List printout of PBAR but not previously processed and placed on TEXT. Generally, this involves contacting various A.I.D. bureau personnel and either picking-up a copy of the subject document(s) or photocopying the document(s) onsite.

c. Identification of and written requests for documents produced and/or held by USAID Missions.

d. Purchase through conventional channels of most books, technical journals, and other serials.

e. Free receipt of some periodicals and newsletters.

f. Agreements with international organizations and libraries wherein A.I.D. receives free publications from these institutions in exchange for A.I.D. publications.

g. Automatic receipt, via contract provision, of technical (R&D) documents.

As an introduction to our proposed approach to acquisitions, a brief description follows of A.I.D.'s operational structure in general and of the paperwork flow in A.I.D.'s Bureau for Science and Technology in particular.

A.I.D. operates through eight bureaus:

a. Four regional bureaus:

- (1) Africa (AFR);
- (2) Asia (ASIA);
- (3) Latin American and Caribbean (LAC); and
- (4) Near East (NE).

- b. Science and Technology (S&T);
- c. Program and Policy Coordination (PPC);
- d. Private Enterprise (PRE); and
- e. Food and Voluntary Assistance (FVA).

For purposes of this discussion, we shall concentrate on the flow of paperwork generated by the project design and approval process in S&T--with the caveat that this description may be invalidated by the results of Administrator McPherson's Task Force on A.I.D. Paperwork.

S&T has four Directorates:

- a. Population/Health;
- b. Energy/Forestry/Environment;
- c. Agriculture/Nutrition/Rural Development; and
- d. Human Resources--includes Education/Development Assistance/Urban Development/International Training.

S&T also has four Technical Offices coordinated by a Program office:

- a. Food and Nutrition;
- b. Forestry;
- c. Agriculture; and
- d. Population.

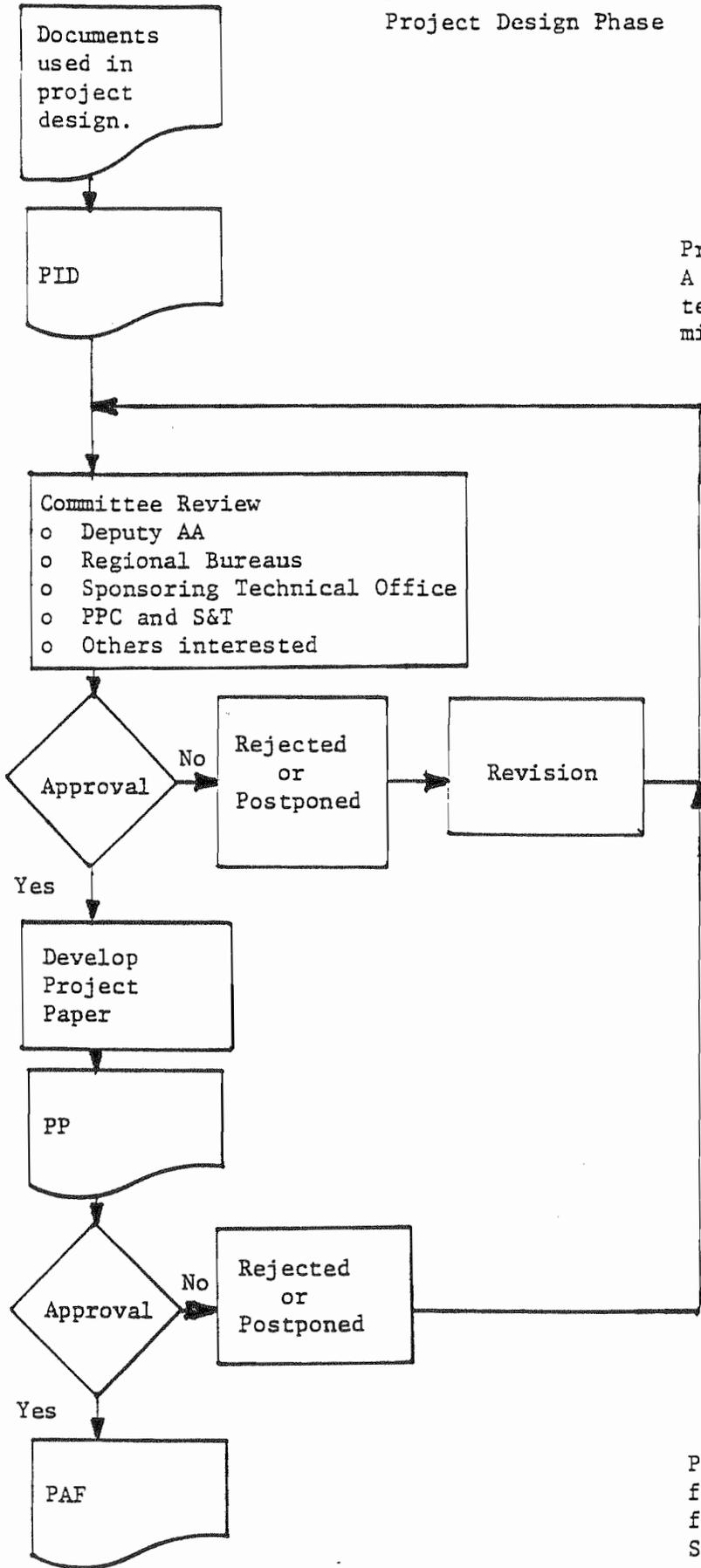
The Technical Offices shepherd projects through all their various phases including design, approval, implementation, evaluation, extension/revision, and termination.

For the project design phase, the flow of documentation may be represented as shown in Exhibit II-2

Documents used in or generated by the project design process include:

- a. Support documents for project designers.
 - (1) A.I.D. country and/or regional planning documents, e.g., CDSS (Country Development Strategy Statement);
 - (2) Data on past A.I.D. efforts in the same area, e.g., PP's and evaluations of similar projects;

Exhibit II-2
 Flow of Documentation
 Project Design Phase

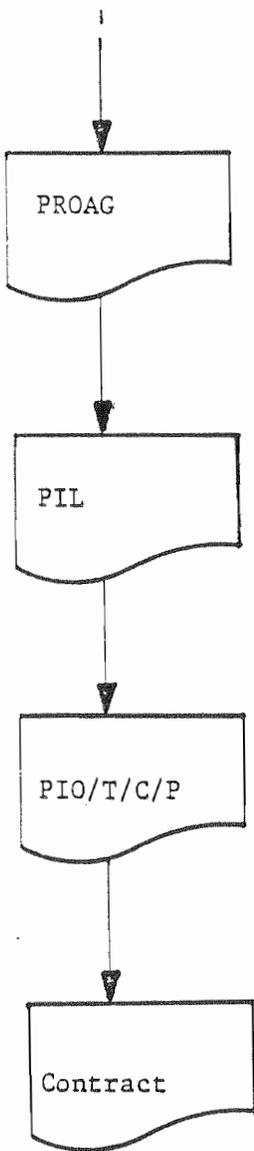


Project Identification Document. A concept paper generated in the technical offices and/or USAID missions.

Project Paper. The final project design submission. Presents rationale, analyses, plan, schedule, cost estimate, and supporting documentation.

Project Authorization and Request for Allotment of Funds. Constitutes formal approval for project paper. Specifies terms, covenants, and conditions for a Project Agreement, authorizes project funding, and requests allotment of funds.

Exhibit II-2 cont'd



Project Agreement. Summarizes the essential elements of the PP, funding parameters, responsibilities of U.S. and host country agencies, and implementation plan. Signed by U.S./host country.

Project Implementation Letter. Provides administrative, financial, and/or technical guidance to host country counterpart officials.

Project Implementation Order/Technical Services. The project's scope of work; includes instructions to A.I.D.'s office of Contract Management. Obligates funds. PIO/C = Commodities; PIO/P = Participant Training.

- (3) Contractor reports and technical literature, e.g., sector assessments, feasibility studies, etc.;
 - (4) Host country planning documents, e.g., multi-year plans, sector plans, etc.; and
 - (5) Data on the country and/or past project efforts available from international organizations, e.g., the World Bank and other donors.
- b. Documents produced from the design process.
- (1) Project Identification Document;
 - (2) Project Paper (a specific document type but a title which also serves as a generic designation for a minimum of 15 different project design instruments);
 - (3) Project Authorization and Request for Allotment of funds;
 - (4) Project Implementation Order/Technical Services; and
 - (5) Contract.
- c. Other documents often included with design documents.
- (1) Issues/Recommendations Paper;
 - (2) Action memoranda;
 - (3) Cables; and
 - (4) Research Studies, Feasibility Studies, and other support documentation.

The Bibliographic Type Code Table (Exhibit II-3) lists codes for all the document types described above. The designation (D) identifies design document while (E) designates evaluative document. Evaluation Documents result from its Evaluation Plan developed by A.I.D.'s overseas missions and by its geographic and central bureaus. Changes in project implementation and/or host country circumstances can, and often do, lead to deferral or cancellation of scheduled evaluations. Historically, A.I.D. completes

Exhibit II-3

BIBLIOGRAPHIC TYPE CODE TABLE

Type

01	(D)	PID (Project Identification Document)
10	(E)	PAR (Project Appraisal Report)
14	(E)	PER (Project Evaluation Report)
15	(E)	PES (Project Evaluation Summary)
16	(E)	Sector Assessment
17	(E)	<u>Special Evaluation Report</u>
18	(E)	Audit Report
20		Economic Analysis Abstracts
21		Conference Proceedings
22		Conference Paper
23		Journal Article
31		Knowledgeable A.I.D. individual*
32		Knowledgeable non-A.I.D. individual**
33		Knowledgeable Undifferentiated individual***
34		Knowledgeable Group
35		Knowledgeable Institution
36	(D)	DEV or EXT (Development or Extended Risk Guaranty Papers)
37	(D)	Loan Agreement
38	(D)	Grant Agreement
39	(D)	Congressional Presentation Facesheets
40	(D)	MG/COOP (Miscellaneous Grants/Cooperative Agreements)
41		Feasibility Study
42	(D)	PP (Project Paper)
43	(D)	PROP (Non-Capital Assistance Project Proposal)
44	(D)	OPG (Operating Program Grant)
45	(D)	DPG (Development Program Grant)
46	(D)	HGPD (Housing Guaranty Program Document)
47	(D)	PAAD (Program Assistance Approval Document)
48	(D)	Title XII Project
49	(D)	NEC (Not Elsewhere Classified Design Document)
50		A.I.D. Action Memorandum
51		Undifferentiated Report
52	(E)	Annual Report
53	(E)	Progress Report/Interim Report
54		Graduate Thesis/Doctoral Dissertation
55		Periodical
56		Yearbook
57	(D)	Loan Paper/Capital Assistance Paper****
58		Bibliography
59	(E)	End of Tour Report
60	(E)	<u>Incoming Cable</u> (Mission to A.I.D.)
61	(E)	<u>Outgoing Cable</u> (A.I.D. to Mission)
62	(E)	A.I.D. Supported Study
63		Research Study
64		Task Force Report
65		Working Paper
66		Book
67		Handbook
68	(E)	Final Report
69		Newspaper

BIBLIOGRAPHIC TYPE CODE TABLE (Cont.)

Type

70	A.I.D. Discussion Paper
71	<u>Sector Analysis/Sector Study</u>
72 (E)	<u>Incoming Airgram (Mission to A.I.D.)</u>
73 (E)	<u>Outgoing Airgram (A.I.D. to Mission)</u>
74	Development Studies Program Tutorial Papers
75	Quick Response
76	Tailored Response
77	Simple Response
78	Directory of Development Resources
79	Technicians on Call for Development
80 (E)	<u>World Bank (IBRD) Project Performance Audit Report</u>
90	<u>Survey Dta (ESDS)</u>
99	Miscellaneous Project Documents NEC

All descriptions shown will appear in automated reports with the following exceptions:

1. Only the portions of an underlined description will appear.
- 2.* This descriptor will be abbreviated to INFORMED A.I.D. INDIVID.
- 3.** This descriptor will be abbreviated to INFORMED NON-A.I.D. INDIVID.
- 4.*** This descriptor will be abbreviated to INFORMED UNDIFF. INDIVID.
- 5.**** This descriptor will be abbreviated to LOAN/CAP. ASSIST. PAPER.
6. (D) = Design Document
(E) = Evaluative Document

approximately 60% of its scheduled evaluations. Because of this situation, DIU's concern regarding evaluations acquisition is largely in ensuring procurement of the evaluation once it has actually been produced rather than in attempting to follow the Agency's planned schedule for production of evaluations. In practice, therefore, DIU acquires evaluations in much the same manner as design documents (described in sections 2 a., b., and c., above).

In general, evaluations fall into three major categories: regular, special, and impact. Within these three categories, 16 different document types are identified for processing purposes. Of the 16, six types are seen with the greatest frequency. These are Project Evaluation Summary, Special Evaluation Report, Audit Report, Annual Report, Progress Report, and Final Report.

Evaluations are normally initiated at three levels: agency-wide, geographic or central bureau, and project or mission. Agency-wide evaluation efforts are largely defined by five impact evaluation type reports coordinated by A.I.D.'s Office of Evaluation in the Bureau for Program and Policy Coordination. Acquisitions of PPC/E-coordinated evaluations is probably 100% of those produced.

Bureau-initiated evaluations focus on a number of projects in a single country, on a single type of project in a number of countries, or on development issues. Each bureau in A.I.D. has its own Office of Evaluation scheduling, performing, contracting for, or tracking on evaluations. In addition to their "suspense lists" of scheduled evaluations, bureaus disseminate quarterly lists of evaluations received and distributed. These lists serve

DIU as acquisition checklists. For those not received, DIU personnel call or visit appropriate contact persons within each Office of Evaluation and attempt thereby to acquire any missing evaluations.

Project or mission-level evaluations are subsumed under bureau-level plans. Many of these evaluations are termed "regular" evaluations by A.I.D. Regular evaluations assess performance of ongoing projects and verify that the project's design is still valid. A mission evaluation plan identifies projects which are to be evaluated in the coming year and submitted to the geographic bureaus. These evaluations are either those called for by project design documents or other evaluations which the mission has an interest in performing, e.g., evaluations of a cluster of projects in one area, some aspect of the overall country program, etc. As mission evaluations are subsumed under bureau plans, they can be assumed to be reported in the bureau's quarterly report. For those not so reported on or those not received, DIU either contacts the desk or the mission itself.

Technical or R&D documents are automatically received in DIU as a result of a deliverable clause in all contracted studies or reports or as an output of a project. A.I.D. uses four primary contract types to support its development activities. All four contract types have a "Reports" clause where the contractor is required to submit two copies of each written technical report to the A.I.D. Reference Center. Reports which are project outputs are elements of project design and are therefore subject to the

same circumstances as the project and the acquisitions channels described above.

Other international donor organizations' machine-readable data base tapes are acquired through exchange or lease agreements negotiated between A.I.D. and the donor institution.

3. Proposed Approach. Two very important features of our acquisitions program will be first, regular contact with project officers, evaluation officers, and technical officers; and secondly, establishment of a target acquisitions data base and regular updating of a document tracking data base on the MINISIS system.

At this time, many of the mechanisms and techniques necessary to ensure complete acquisition of project-related and other development documentation are mandated or operating. They just have to be made to work. A few additions to these activities are necessary. Some involve no more than people, public relations, and persistence. Others involve using the MINISIS system.

Building on DIU's experiences and working under DIU's general supervision, DIHF personnel will obtain all relevant development documentation through a process that combines concern for a user-oriented collection with a responsive system. Elements of our acquisitions plan are:

a. a formal directive from A.I.D.'s Administrator requiring timely delivery to DIU of all appropriate project design, implementation, and evaluation documentation;

b. a strong working relationship with A.I.D. personnel responsible for document production, control and distribution throughout the Agency: DIHF personnel will conduct a public

relations effort to include telephone calls and visits to A.I.D. bureaus and offices informing responsible officials of A.I.D.'s new DIHF, explaining the need for documents, and making clear that they too will be beneficiaries of DIU's many valuable services;

c. regular contact with A.I.D. offices, because desk officers and other personnel are frequently rotated;

d. formal arrangements with records management personnel in each of the regional bureaus (Asia, Africa, Latin America and Near East) to obtain and microfiche all Bureau documents, and to copy and film those needed by DIU/DIHF and return the source documents and fiche to the appropriate bureaus; and

e. continuation of this effort by determining what documents are currently available and when new documents are expected. This work would build on several mechanisms already in place in the Agency. For instance, in regard to A.I.D. evaluations, we would:

(1) obtain the Agency Evaluation Plan and the Regional Bureau Quarterly Receipts Reports to use as accession tools. We would check off those received and pursue those not received;

(2) consult with PPC/E regarding which evaluations are priority items and which items they would like to have receive special treatment (as was recently done with PPC/E's Impact Evaluation in ARDA, Vol. 9, No. 2 and in BREF);

(3) scan project papers to learn of planned evaluations and their due dates;

(4) either use A.I.D.'s COORS system interactively or obtain schedules of deliverables through A.I.D.'s Contracts Office

for use in tracking evaluations (as well as A.I.D.-funded R&D and other studies);

(5) seek to include a statement of requirements, procedures, and bibliographic processing forms in every contract, task order, work order, delivery order, amendment, and grant issued by the Agency that would require deposit of a copy of all technical reports, papers, documents, or other deliverables with DIU as part of the contractual obligation of A.I.D. contractors or grantees; and

(6) create a new data field in the data base for use in the document processing activity in which the date of the next scheduled evaluation (PES, Special, Final, etc.) will be noted. As part of our document tracking system, we could thus generate lists of projects for which specific documents are scheduled.

Use must be made of Agency mechanisms to identify project design documentation. For instance, A.I.D.'s Near East Bureau maintains status reports by stage of all planned project activities; the Africa Bureau will soon be using a system to permit tracking on all obligations in a quarterly basis; A.I.D.'s Office of Financial Management provides a quarterly report on all active projects; and .PBAR lists all approved projects. DIHF personnel would regularly compare these listings with DIU's holdings to produce a listing of projects to be acquired. Documentation describing these projects would then be actively sought, acquired, and processed. A Project/Tracking Data Base will be created on the MINISIS system to identify future project document sources as soon as projects have been identified.

f. Use DIHF personnel to reproduce documents of which only copies exist. We anticipate the need for this activity would lessen as Agency personnel develop confidence in DIHF personnel for document return;

g. User needs assessment to focus limited acquisitions resources on obtaining those documents and other materials considered most relevant to expressed and anticipated user needs;

h. Tracking key projects for immediate acquisition of documents upon availability instead of via routine delivery schedules;

i. Active cable correspondence with A.I.D. Missions to seek their cooperation in providing documents, to inform them of services available through the facility, and to establish a communications/document pipeline;

j. Information exchange agreements with other international development and private voluntary organizations, federal agencies, and private/commercial organizations in order to operate cooperative acquisitions and processing programs, including acquisition of information materials in machine-readable formats.

The DIHF personnel who will be involved in the identification, acquisitions, and selection activities listed above have performed many of these activities under contract with A.I.D., and thus their background and expertise in these activities should aid our progress in acquisitions.

The target acquisitions data base will have an important function in many DIHF activities. Project design materials include schedules for project evaluations and requirements for reports as

outputs of projects. This information will be recorded on the system along with supplementary information from other sources as appropriate to provide DIU with the capability to support Agency requests for status reports on evaluations, research studies, and other document-generating activities. It will also permit DIU a rapid means of determining data base currency when compared to PBAR-type listing of all projects or documents at a particular point in time. An acquisitions checklist can be generated to determine which documents of those available have actually been received. Organizations or individuals responsible for a document delivery could be reminded of their obligation to provide documents as available.

Other important benefits of the target acquisitions system include:

- a. Creating a skeleton record to alert users of availability;
- b. Determining where the document resides in the processing system;
- c. Monitoring the length of time it takes to process a document; and
- d. Identifying key projects and ensuring comprehensive document acquisition.

All of these activities can be used to enhance processing of documents and build confidence in DIU and in the system as being fully responsive to user needs.

4. Data Base Support Requirements.

Two MINISIS data bases will be developed to facilitate the acquisitions process.

- o The Target Acquisition data base will be used to keep

track of project documents to be issued in the future and will assist AID/DIU by prompting the project document sources as soon as a publication date is known.

Data fields include:

- (AP) ISN
- (AP) Document Type and Form
Document Status
- (AP) Document Title
Expected Date of Publication
Audit Control Information (Entry and Update)
- (AP) Contact for Document Acquisitions
Date Last Requested
Document Source/Citation
- (AP) Project Number and Related Project Number
Date Received and Entered to the Documents Data Base
- (AP) Contract Number
Other I.D. Numbers
Comments/Notes

o The Documents Tracking data base will contain data describing the auditing of the acquisition, cataloging, indexing, abstracting and warehousing functions, and will be used to report the status of documents received for processing. The documents tracking data base will be used for both A.I.D. and non-A.I.D. acquisition and processing. The data fields are included in Section II.B.4.

B. Acquisitions of Non-A.I.D. Documents.

1. Definition/Purpose. At the present time, A.I.D. is authorized to identify, acquire, and process into its system development materials which may or may not be the result of A.I.D. funding.

Included in this category of materials are:

- a. Commercially published monographs directories, handbooks, indexes, and conference proceedings;
- b. Journals and serials;
- c. Books, monographs, reports and other publications from voluntary organizations, non-profit organizations, and associations;
- d. Government publications from other federal departments, and agencies;
- e. Theses and dissertations;
- f. Materials received through reciprocal exchange agreements; and
- g. Journal articles on development for current awareness.

2. Current Status. Selection of purchased non-A.I.D. development materials is currently done by A.I.D. staff. Non-A.I.D. materials are selected from:

- a. A.I.D. staff requests for literature;
- b. Publishers' announcements, and catalogs;
- c. Bibliographies; and
- d. Current newspapers and magazines.

Ordering materials and maintaining records are currently done by Helen Davidson and Bob Ashton. Requisitioned items require the approval of David Donovan or his designate prior to ordering.

Items ordered currently go through the following process:

- a. Typing on Supplies Requisition (A.I.D. Form 5-7 9/76);
- b. Routing to Bureau Programming Office for an obligation number;

- c. Routing through Financial Management Office for approval; and
- d. Routing to Purchasing Office where order is placed with publisher.

A notebook is retained containing titles of requested items, back-up material, and required forms. One of the main problems with the present system is the length of time required to place an order.

For the last 3 months a \$1000 account with Sydney Kramer books has been used for purchasing materials. Deposit accounts are established with the following:

- o National Technical Information Service;
- o Institute for Scientific Information; and
- o Unipub.

The number of requisitioned items for previous years are:

- o FY 80 - 99 titles
- o FY 81 - 50 titles

The DIHF will take over the function of ordering non-A.I.D. development materials. Also, approximately 10 exchange agreements are in place with organizations such as Volunteers in Technical Assistance (VITA) and the University of Sussex (England). An estimated 1000 documents/year are acquired from gift and exchange sources.

3. Proposed Approach. The DIHF is prepared to receive all DIU requests for non-AID materials. We will use an order tracking data base to maintain control of items on order or items received. Orders placed by A.I.D. can be monitored and DIHF will be in a position to provide better ordering, tracking, and financial accountability.

During the interim period we will maintain manual records and report on a monthly basis items ordered and received.

A new dimension of the acquisition function would be a current awareness effort focusing on systemized scanning of the literature to identify journal articles concerned with development. While this is a desirable service, it will not receive priority attention.

DIHF will scan the current journals received by A.I.D. at the DIC's for substantive articles. Articles will be identified and prepared for processing in which they will be microfiched and entered into RANDD for A.I.D. internal use only. A unique number series for the fiche collection and file identification will commence with a PC. prefix.

A supplementary list of journal titles will also be identified for periodic scanning. This list will include journal titles which are not indexed by the commercial data base vendors such as Development Digest.

4. Data Base Support Requirements. As documents are identified for acquisitions, they will be entered into the Order Tracking Data Base (PS).

The Order Tracking Data Base (PS) will contain data describing the audit of the ordering and receipt of commercial documents and will be linked to other steps in the processing scheme (such as cataloging or document tracking).

Data elements will include:

ISN
(AP) ORDER CONTROL NUMBER
TITLE
AUTHOR
DATE
PUBLISHER CODE
ISBN
PRICE

NUMBER OF COPIES
DATE REQUEST RECEIVED
DATE TO PURCHASING
DATE ITEM RECEIVED
INPUT OPERATOR
NOTES

A KSAM authority file will decode the Vendor Code: for example, publisher or suppliers. The data elements in the authority file will be:

PUBLISHER CODE
PUBLISHER NAME
PUBLISHER ADDRESS 1
PUBLISHER ADDRESS 2
PUBLISHER ADDRESS 3
CITY/STATE/ZIP
PUBLISHER ATTENTION
PUBLISHER ATTENTION
NOTES

The order tracking data base will be combined with basic bibliographic information from the documents data base including, author, title, publisher, and date of publication to facilitate reporting and tracking of titles in process.

5. Implementation. The DIHF is prepared to immediately receive requests for ordering publications. A pilot order tracking system has been placed on MINISIS and is undergoing testing.

C. Serials Record Control.

1. Definition and Purpose. A collection of A.I.D and non-A.I.D. serials are acquired, routed, and maintained for the benefit of A.I.D. research and current awareness.

2. Current Status. 643 serial titles are being received by the Development Information Center including dailies, annual reports, statistical reports, journals, and other regularly published titles. (See Appendix B.) Between 200 and 400 titles are ordered through the subscription agents Faxon or Ebsco. Subscriptions have been renewed for 1982.

Titles are checked in manually on a kardex. Issues are retained for approximately three years (two years plus current year) except for the population titles which may be retained indefinitely. Titles are not bound, nor is microfiche obtained. 25 to 50 percent of the titles are routed to A.I.D. personnel. Duplicate copies of some titles are received along with five to seven copies of selections of Current Contents. One copy of Current Contents is retained as a file copy in the Development Information Center.

An IQC is currently held by Costabile Associates, Inc. to check-in and route serials. In addition, serials titles have been checked against OCLC, and OCLC and ISSN numbers have been indicated when found.

Serials are received by the A.I.D. Reference Center; however, they are cataloged, classified and interfiled into the document collection and the titles are not captured on a separate list. Holdings records are maintained on the shelf list which is located in Room 504 in Pomponio Plaza where Costabile has been performing

cataloging activities. A project is underway at the A.I.D. Technical Information Center (105) to identify and weed from the document collection those serial titles which should be received on a regular basis.

3. Proposed Approach. Our proposed approach is the continued maintenance of the manual kardex at the present time. Since renewals for 1982 have been placed, our plan is to re-evaluate the serials procedures in June of 1982 and consider the creation of a mechanized system when the labor intensive renewal process for 1983 is initiated. Exhibit II-4, presented on the following page, illustrates a proposed approach for serials control and the associated accounting functions which ultimately can be integrated into MINISIS.

A MINISIS software package for serials control is under development, but is not expected to be available until late 1982. It is currently being tested in a university environment in the Netherlands. As such, we will employ other means until such time that this aspect of the system proves beneficial.

An alternative is to use the OCLC Serials Control System. One advantage of the OCLC system is that it is operational for accounting and check-in functions. The claiming function is under development but not yet available. Costabile Associates has already completed preliminary bibliographic verification and assigning of OCLC numbers. The verification was done against the OCLC system which should simplify entry into OCLC. The primary disadvantage of this process is that the data will not be integrated into the MINISIS system. Not being part of MINISIS is only a

serious disadvantage in that on-line integration of all of A.I.D.'s collections is made more difficult.

Another alternative for use is a serials control software package (CHECKMATE) which was developed by the California Library Authority for Systems and Services (CLASS). CHECKMATE is currently available through Capital Systems Group and operates on a TRS-80 Model II Radio Shack microcomputer. A communicating terminal (estimated cost \$200) could link into the TRS-80 at CSG. The CHECKMATE software is fully developed and includes:

- o automated check-in, routing, and claiming for 2000 separate titles (with each issue/title accounted for in a separate subsystem);
- o financial records by account and sub-account;
- o holdings and title histories;
- o capability for indexing by subject;
- o creating union lists;
- o subscription expiration alert.

We will continue to study the options available to A.I.D. for serials control, but recommend, at this time, that we use OCLC. OCLC is not as refined as CHECKMATE, especially for claiming and check-in (prompts only for next issue rather than profiling entire year) but significant effort goes into maintaining titles which we would have to undertake using MINISIS or CHECKMATE. In addition, the current collection has already been cataloged.

Another aspect of our approach will be to convert the current journals holding list, mentioned by Costabile Associates on the WANG VS system, to MINISIS. This will enable DIHF users to search the holdings list to determine the appropriateness of specific titles by subject interest.

Similarly, we plan to enter the contents of Development Digest and prepare an annual index that will be available through DIHF.

4. Data Base Support Requirements. As indicated above, the plans to automate this aspect of the work will depend upon the availability of the software package. We do not require system support immediately to perform claiming and tracking of current subscriptions, and will emphasize this aspect of work over the ordering which has already been achieved for 1982.

5. Implementation. The DIHF is prepared to assume responsibility for the serials ordering, check-in, routing and claiming, upon expiration of the IQC currently held by Costabile Associates, Inc. It is our understanding that we will begin work on this aspect of the project January 29, 1982.

D. Subject Authority Files (Thesaurus).

1. Current Status.

a. Overview. There are currently ten separate subject-related authority lists being used by A.I.D. (See Appendix C). The lists have developed over many years in response to changing situations, and to recommendations by various individuals both inside and outside A.I.D. The three main lists being used are Library of Congress Subject Headings, RANDD keywords, and the DIS Thesaurus. All documents cataloged in the card catalog receive LC Subject Headings and Dewey Decimal Classification numbers in addition to their RANDD or DIS keywords. The documents are retrievable on the two data bases by either RANDD or DIS keywords, but not by LC Subject Headings.

The RANDD keyword list is a straight alphabetic listing of all the descriptors that can be applied to RANDD technical reports. It is composed of approximately 2,700 terms, including both proper and common names, and includes all geographic descriptors. A maximum of twenty keywords can be assigned to one document. The RANDD keyword list does not contain any syndetic structure, i.e., there is no lead-in vocabulary or hierarchical structure. The RANDD keywords are applied by an IQC contractor, and are reviewed by A.I.D. staff.

The DIS Thesaurus contains those descriptors that can be applied to A.I.D. projects and to A.I.D. project documentation. The thesaurus, composed of approximately 2,900 main terms, contains both lead-in vocabulary and hierarchy.

A modified version of the Library of Congress Subject Headings is also used to describe A.I.D. documents. Library of Congress Subject Headings tend to be precombined. In this regard, they are similar to the DIS descriptors (although DIS descriptors are more precombined than LCSH). Documents receive either RANDD or DIS keywords, and in addition to this, they may receive LC descriptors. In many cases these three descriptor lists have different terms for the same concept.

b. Other Subject-Related Authority Files. In addition to the RANDD keyword lists, the DIS Thesaurus, and Library of Congress Subject Headings, there are seven other subject-related authority files being used by A.I.D.

AGRIS Subject Codes are used by RANDD to supply the Minor Class code, the Primary Subject Category code, and the Secondary Subject Category code, all part of the Subject Classification Number. The AGRIS codes have been modified somewhat in order to be of use to A.I.D. Instead of the single letter and two digit code found in the AGRIS codes, e.g. A00-AGRICULTURE, M20-OCEANOGRAPHY, A.I.D. uses two letters and two digits. The reason for this is that the AGRIS codes are appropriate for a classification scheme used to organize the information published in the Catalogue of Research Literature for Development, whereas A.I.D.'s collection covers many other development topics in addition to agriculture. An initial letter was developed to indicate the major subject area of the document, and then the AGRIS codes were added to that initial letter.

The Dewey Decimal Classification Number is assigned to all those documents that will appear in the card catalog housed in Room 1656, Main State. The major problem with using DDC for the shelf arrangement of a specialized collection is that most documents will appear within one or two classification numbers. The Dewey number is assigned by IQC staff, and is used for shelf arrangement at 1656. It was recommended at one time that the Center in Room 105 also arrange documents by Dewey Number.

FAO Codes are AGRIS Geographic Codes. They are used to construct the first three digits of the ARC, or the A.I.D. REFERENCE CENTER CATALOG NUMBER. The ARC consists of an FAO Geographic Code, a Dewey Number, and a Cutter Number.

RANDD uses a Major Class Code which is a single alphabetic character. There are ten major classes. The Major Class code is the first character in the Subject Classification Number. The Subject Classification Number is composed of: 1) Major Class, 2) Minor Class, 3) Primary Subject Category Code, 4) Secondary Subject Category Code, and 5) FAO Geographic Code.

DIS uses three subject-related authority files in addition to the DIS Thesaurus: 1) Special Concern Codes, 2) Technical Codes, and 3) Purpose Codes. These codes comprise the Activity Identification and Classification (AIC) System. The AIC System is found in the A.I.D. Handbook.

The Purpose code indicates the purpose of the project or activity. It is a highly precombined descriptive phrase that is composed of a purpose, e.g., INCREASE THE USE OF FAMILY PLANNING PROGRAMS, and a standard subheading, e.g., FULL-SCALE PROGRAM, or

PILOT OR SMALL-SCALE PROGRAM. The subheadings remain the same throughout the purpose codes. There are eight major categories represented by the purpose codes.

The Technical Code is a three digit code intended to describe the technical field involved in a project. The code is picked up by the DIS cataloger from the document facesheet. Technical Codes provide limited subject access to the Country Program Data Bank.

Special Concern Codes are alphabetic codes designating special interests of the Agency, e.g., BENEFICIARY -- RURAL POOR is coded BR. There are 49 special concern codes. They are picked up from the document facesheet or the Master List.

The AICS codes have existed in the Agency for many years. They are the only way of gaining subject access to the other data bases maintained by A.I.D. Within the context of DIS the AICS codes represent redundant indexing. If the document or project is adequately indexed using the DIS Thesaurus, those concepts contained in the AICS codes will also be descriptors.

2. Proposed Approach.

a. Description. In March 1981, Capital Systems Group submitted a final report on the development of a thesaurus of descriptors for the Development Information System at A.I.D.

After extensive interviews with A.I.D. staff and the examination of existing thesauri and keyword lists both internal and external to A.I.D., it was recommended that A.I.D. create its own thesaurus and incorporate into it the following:

- (1) comprehensive subject coverage related to international development;
- (2) integration of concepts for management functions and policymaking now expressed by the purpose and technical codes into the technical vocabulary;
- (3) addition of terms to describe the contents of evaluation documents such as evaluation methodology and techniques;
- (4) comprehensive geographic coverage that is as specific as possible; whenever possible the geographic areas should be broken down beyond country, region, and province;
- (5) extensive lead-in vocabulary that will accommodate agency jargon;
- (6) standardization of word forms and elimination of abbreviations;
- (7) simple, but specific precombined descriptors that are used with a system of generic posting;
- (8) a logical structure that includes both hierarchical and associative relationships;
- (9) several kinds of displays for terms such as rotated keywords, tree structures and alphabetic listings;
- (10) potential for translation into other foreign languages to facilitate international networking;
- (11) purpose and technical terms to replace codes in PBAR and PAIS; and
- (12) general and specific subject categories to arrange and index publications.

Rather than A.I.D.'s constructing an entirely new thesaurus from scratch, it was recommended that A.I.D. base its new thesaurus on the UNESCO Thesaurus. The UNESCO Thesaurus has a well defined notation, it is polyhierarchical, and has highly precombined descriptors. Its subject coverage of agriculture is weak; its subject coverage in other areas is more extensive than that required by A.I.D. Approximately 2,600 of the A.I.D. terms (LCSH, RANDD, DIS, and AICS) match terms in UNESCO.

The other external thesaurus on which it would be possible to base the A.I.D. Thesaurus is the OECD Macrothesaurus. Macrothesaurus is less precombined than UNESCO, and its notation is less defined. On the other hand its coverage of agriculture is significantly better than UNESCO's, and most significant at this point, Macrothesaurus is up and running on MINISIS at the United Nations and at the IDRC in Ottawa, Canada. Macrothesaurus currently appears in three languages: English, French, and Spanish. Approximately 1,800 A.I.D. terms match Macrothesaurus terms.

The goals of the thesaurus project are to create a new A.I.D. Thesaurus based on either UNESCO or Macrothesaurus, to incorporate the twelve points listed previously, and to account for all currently used A.I.D. descriptors so that re-indexing is not required.

b. Construction. There are nine steps in the creation of the A.I.D. Thesaurus. They illustrate:

(1) acquiring Macrothesaurus and UNESCO tapes in ISO-2709 format and a copyright release from OECD and UNESCO;

(2) generating the A.I.D. Thesaurus subset of terms from DIS, RANDD, LCSH, and AICS. This subset should contain approximately 8,150 terms;

(3) establishing the data base design. This step involves both a fundamental decision by A.I.D. as to the primary structure to be employed, and close work with a programmer, as it will determine the format of the various outputs used during the construction. A small test file will be used to check the performance of the conversion programs;

(4) creating the A.I.D. Thesaurus file; this will be a character for character match between A.I.D. and Macro/UNESCO terms. This step provides a working thesaurus set and determines the size of the non-match file. The match file will be played out in classified order so that the completeness of the initial hierarchies can be evaluated;

(5) completing the hierarchies created in step 4 with other Macrothesaurus/UNESCO Terms; the file will be played out in both alphabetical and classified listings;

(6) examining the non-matches for obvious synonyms and transferring the information to the working file. These terms will be the forbidden terms (those terms with USE another term);

(7) semantically factoring the precombined non-matches, such as breaking down highly precombined descriptors into simpler components. Transferring duplicate and synonymous information to the working file and playing out the file in classified order are also depicted;

(8) integrating the remaining non-matches into the working file, and defining the hierarchical and associative relationships. The file will be played out into three separate display formats: alphabetical with lead-in vocabulary, classified with notation, and keyword out-of-context (KWOC). The thesaurus will be reviewed; and, finally

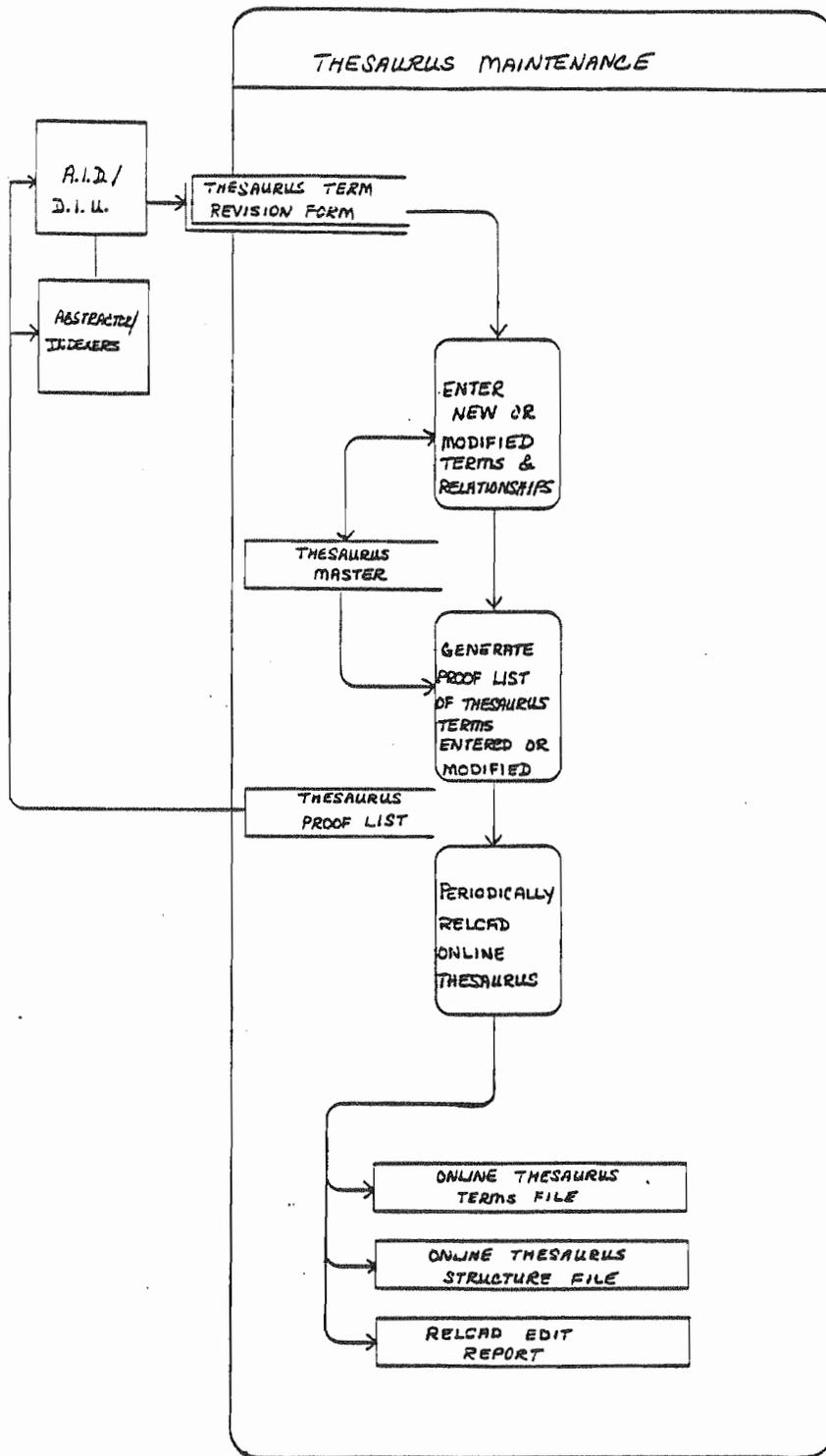
(9) creating the final thesaurus. A.I.D. will review the thesaurus and suggest changes. After the changes are made, phototypesetting tapes will be created. The thesaurus will be typeset, and the graphics, preparatory material and covers will be generated.

A major component of the construction of the thesaurus is converting the data base so that the old records can be retrieved with the new indexing vocabulary. This will be accomplished by keeping track of the disposition of the old A.I.D. terms as the thesaurus is being constructed, and then changing the old A.I.D. indexing vocabulary to the new one with the use of the global feature of the MINISIS modify processor. After this is done, data base searching using the old descriptors will not be possible, unless the old descriptors have been made forbidden terms. MINISIS has a forbidden term feature in its Thesaurus processor which allows the searcher to enter the illegal term but to retrieve records on the legal term; MINISIS performs the UF/USE reciprocal for the searcher.

c. Maintenance. (See Exhibit II-5) The thesaurus feature on MINISIS will provide:

- o a controlled vocabulary for the validation of descriptors

Exhibit II-5
Thesaurus Maintenance



- o a translation facility so that descriptors entered in one language during a search will be searched for automatically in other languages (up to 9). Macro-thesaurus currently exists in three languages.
- o structural relationships among terms, so that a search on a descriptor can automatically retrieve containing its broader, narrower, or related terms.
- o an "explode" capability that will allow the user to retrieve all the terms in a group, e.g., ANY AFRICA will retrieve the term AFRICA as well as all countries within Africa. The ANY tables must be constructed; they are not automatic.

The thesaurus should be updated in batches rather than on a term-by-term basis. The changes should be issued as updates to the thesaurus, and if enough updates accumulate, a new edition of the thesaurus should be issued.

A central authority should be established to consider changes to the thesaurus. After the thesaurus is established, it is important that changes be considered carefully by a committee. Additions and deletions recommended by an individual or by one office should be examined in the light of the entire system before they are implemented. It is unlikely that any one individual will understand the information system well enough to foresee the implications of his/her recommended changes.

Once the changes have been approved by a committee, they will be entered into the Thesaurus Master through use of the Thesaurus Term Review Form (See Exhibit II-6). All new terms must be placed carefully into their appropriate hierarchy (MINISIS does not support polyhierarchy) and all relationships assigned.

d. Use. The thesaurus will be used by catalogers and indexers to describe the subject content of documents, projects and knowledgeable institutions, and it will be used to retrieve records

Thesaurus Term Review Form

THESAURUS TERM REVIEW		DATE SUBMITTED	NUMBER
		DAY MONTH YEAR	
SUBJECT TERM			
ACTION REQUIRED			
ADD AS A NEW TERM POSTABLE <input type="checkbox"/> NON-POSTABLE <input type="checkbox"/>	CHANGE TERM TO POSTABLE <input type="checkbox"/> NON-POSTABLE <input type="checkbox"/>	SPELLING FROM	
CROSS-REFERENCE ADD <input type="checkbox"/> DELETE <input type="checkbox"/> <small>REFERENCES SHOWN BELOW</small>	DELETE TERM DELETE ONLY <input type="checkbox"/> DELETE & TRANSFER <input type="checkbox"/> <small>POSTINGS TO --</small>		
SOURCE DATA			
ACCESSION NO	SUGGESTED BY		
TERM USED IN LIEU OF REQUESTED TERM			
AMPLIFYING INFORMATION			
SCOPE NOTE			
DEFINITION			
CROSS-REFERENCE STRUCTURE			
USE	USED FOR (UF)		
BROADER TERMS (BT)	NARROWER TERMS (NT)		
RELATED TERMS (RT)			
COMMENTS		SUBMITTED BY	
		TITLE	
REVIEW AUTHORITY			
REVIEW COMMENTS			
ACTION APPROVED <input type="checkbox"/> DISAPPROVED <input type="checkbox"/>	REVIEWER (Signature)		DATE DAY MONTH YEAR

from the data base by combining descriptors with the boolean and, or, not, and Xor, operators.

It will also be possible to generate indexes to documents and to sort records within publications on the basis of their keywords.

[NOTE: A report outlining our proposed approach and recommendations, in greater detail, was submitted to A.I.D. in early January, 1982 for official review and approval of approach. The exact course of action taken to develop the thesaurus will be determined subsequent to a review and decision on the plan.]

E. Non-Subject Authority Files.

1. Current Status. There are approximately 16 separate non-subject authority lists currently being used to process DI/DIU documents and projects (Exhibit II-7). RANDD and DIS have three non-subject authority lists in common: Bibliographic Type Codes, Organization Type Codes, and A.I.D. Geographic Codes (Exhibit II-8). The remaining 13 codes are specific to either RANDD or DIS. Some of the codes and lists currently being used are, in fact, subject authority files and not descriptive codes. The Special Concern Codes, Purpose Codes, and Technical Codes come under this category.

The codes, abbreviations, or names are assigned to the project descriptions, project documents, and technical reports by contract staff, and are located in separate booklets and lists, some of which are sections in the A.I.D. Handbook. The codes were designed to facilitate uniform cataloging, thereby improving retrieval. Familiarity with the plethora of codes (there are 63 bibliographic type codes alone) makes assigning them to documents a fairly routine procedure; however, the same level of familiarity cannot be assumed on the part of a large and diverse user group.

The non-subject authority lists seem to have been generated by separate offices at A.I.D. and have accumulated over time. The codes are both elaborate and specific. In many cases they duplicate the information found in the keywords. In some cases they appear to be attempts to retrieve information at the class level rather than at a specific level, e.g., the code 016 (organizational type) allows retrieval of all professional membership organizations, while the Organization Name field might contain the

specific information "Credit Union National Association." In other cases the code serves as a sort of notation for one and only one entity, as it does in the Donor Organization and University codes. In these instances codes appear to have developed as a way of circumventing spelling errors and discrepancies in assigning abbreviation, e.g., by assigning the code 020030 to Arizona State University, the problems of retrieving Ariz State U. or Arizona University are avoided. The code also allows for an easy distinction between the University of Arizona (020070) and Arizona State University.

Several of these non-subject authority codes are used in the retrieval of information from RANDD, TEXT, and BREF. Those most commonly used are Geographic Codes and Bibliographic Type Codes, which are usually used in conjunction with subject terms. The rest of the codes are used infrequently.

Currently, there is a feature in the data bases that resembles a conversion table. For instance the RANDD cataloger enters only the abbreviation for the name of the Reference Organization. That abbreviation, however, automatically pulls a Type Code and a Recipient Code from the A.I.D. files and creates a code composed of three separate elements. The full name of the organization is also stored and can be printed out by the searcher. The same is true of the Language element. There is no field on the Bibliographic Data Sheet in which to record language of the document; however, if the cataloger happens to place the word "French" or "Spanish" in the descriptor field, a two letter code indicating language is automatically generated, and can be retrieved by the

Exhibit II-7. Non-Subject Authority Lists

1. Bibliographic Type Code. A two-digit code describing a document, an individual, or an institution. It is found in the tenth and eleventh digits of the BIBID in TEXT, and is field 16 on the RANDD input sheet.
2. Contract Type Code. The type of AID contract that funded the activity responsible for producing this document, used in RANDD.
3. Corporate Author. The corporate body issuing a document. This file is used only in RANDD. A list of RANDD documents sorted by Author is checked to see that entries are consistent. Corporate author may be different from Reference Organization.
4. Document Status. A one character code indicating the status of the processing of a document, used in RANDD.
5. Donor Organization. A code identifying other organizations sponsoring a related project, used in DIS.
6. Evaluation Keywords. These are keywords used for the DIS data base. They describe the sort of evaluation, e.g., "logframe change" or "limited data" and are descriptive rather than subject-oriented.
7. FAO (Geographic) Code. A four character, alphanumeric code representing a geographic area. It makes up the last 4 characters in the subject classification number. It is taken from the FAO/AGRIS Codes and is used in RANDD.
8. Geographic Code (A.I.D.). A three digit code designating the geographic location of the project. The codes are part of the A.I.D. Handbook. It is the first three digits of the Project9. The Project9 number makes up the first nine digits of the BIBID, a 13 digit, unique number in BREF. Project numbers always exist in DIS, they sometimes exist in RANDD.
9. Institution. A ten character alphanumeric code used in DIS (BREF) for a BIBTYPE of 35, knowledgeable institution. This does not correspond to the organization name/code in RANDD, nor does it correspond to the Donor Organization in TEXT. (No exact count - probably over 500.)
10. Language. A two character alphanumeric code indicating the language in which the document is available. It exists as a table built into Inquire, and is used in RANDD. Descriptors are scanned at input for occurrence of a language name. If French, Portuguese, Spanish or English are found, the two name character code is applied.

Exhibit II-7. Non-Subject Authority Lists (Cont.)

11. Manpower Occupation. (Area of Expertise Table) The occupation of an individual cataloged as a BIBTYPE 31, 32, or 33 (knowledgeable individuals), used in DIS.
12. Organization Name. The name of the organization responsible for writing the document or responsible for the work. In RANDD this field is part of the Reference Organization (field 9 on the RANDD Bibliographic Input Sheet). The name of the organization is taken from an A.I.D. Contract/Grant Master List that has been sorted by contractor name. In BREF the organization responsible for writing the document is recorded.
13. Organization Type Code. A three digit code describing the type of organization responsible for issuing a document. The same list of codes is used by both RANDD and DIS. In RANDD this three digit code precedes the organization code and recipient code, the three of which comprise the Reference Organization Code. In DIS the code is manually assigned by the cataloger. In RANDD it appears to be generated automatically by tables constructed by DS/DIU on Inquire.
14. Recipient Code. A 13 character code assigned by DS/DIU to those institutions responding to the ADDS questionnaire. ADDS is a data base of names and addresses. This code is one of three components of the Reference Organization code used in the RANDD data base. It does not appear to be entered manually but rather to be generated automatically through the Reference Organization name.
15. Reference Organization. A parent field in the RANDD data base composed of Organization Type, Organization Code, and Recipient Code. The Reference Organization name is entered in field 9 of the RANDD Bibliographic Input Sheet. Catalogers do not manually assign the codes; they are responsible only for checking the form of the Reference Organization name against an authority list. The actual codes are generated automatically by using tables and the ADDS data base.
16. University. As with organizations, university names can be used in several places on input sheets. They can be the recipients of 211D contracts, they can be corporate authors, etc. DIS, however, has a special list of university codes to be used when the location of a document is a university or when the BIBTYPE is a 35 (knowledgeable institution). The codes are specific to a university.

Exhibit II-8. Analysis of Non-Subject Authority Files
Applied to DIS Data Bases

<u>File Name</u>	<u>RANDD</u>	<u>DIS</u>	<u>No.</u>
1. Bibliographic Type Code	X	X	63
2. Contract Type Code	X		3
3. Corporate Author File	X		
4. Document Status	X		3
5. Donor Organization Code		X	99
6. Evaluation Keywords		X	19
7. FAO Geographic Code	X		620
8. Geographic Code (A.I.D.)	X	X	319
9. Institution Code	X	X	est.
10. Language Code			4
11. Manpower Occupation		X	est.
12. Organization Name Code		X	
13. Organization Type Code	X*	X	27
14. Recipient Code	X*		6,783
15. Reference Organization Code	X		665
16. University Code		X	

*These are not assigned by the RANDD cataloger, but are computer generated after data entry.

searcher. Although "language" looks like a data element in the RANDD data base, it is only there if the cataloger places a language name in the descriptor field. Since the catalogers are not aware of the behind-the-scene activity relating to a language name, they are probably inconsistent in their entries. It is doubtful that retrieving documents tagged with QB will actually capture all Spanish language reports. At the very least, it is important that the catalogers be aware of all system features that depend in any way on their cataloging.

2. Proposed Approach.

a. Description. It is important to retain the information that will be required for retrieval, but it is also important to create a system that is easy to use. The main users of the system at this time are very familiar with those aspects of it that produce their bibliographies and listings. It is hoped that the information system will eventually be used by staff throughout the world and the same level of familiarity on the part of mission staff or LDC agency personnel cannot be assumed.

b. Construction. These are some general recommendations for the non-subject authority files:

- o They should be the same for project documents and technical reports whenever this is possible;
- o Codes should be eliminated when they refer to a unique, specific entity, i.e., codes should not exist for proper names;
- o The terms in a list need to be mutually exclusive, or the cataloger needs to be able to assign more than one term from the list; and
- o Those codes not actually used in retrieval should be eliminated.

Explicit, uniform cataloging rules should eliminate the need for coding universities and organizations. As long as names are entered consistently in a certain form they are retrievable using that same form. If Auburn University is the corporate author, or the holder of a special collection, or the recipient of an A.I.D. contract, it should simply be recorded as "Auburn University." This same sort of rule can be applied to any other code that represents one and only one entity, i.e., state clearly the rules for recording the (proper) name, and record it that way in any and all appropriate fields. An authority file can be generated to check the consistency of entries.

Related to the need for explicit cataloging rules is the need for single lists. For those authority lists that are kept, the same list should suffice for each and every field that requires that bit of information. One list of geographic locations should be used, not A.I.D. codes and FAO codes as is currently the case. The same rule should be applied to organization names. There should be one way to record university and institution names regardless of whether they are on DIS or RANDD, or whether they are the reference organization or the corporate author. The user should be the one to specify where he/she wants that name to appear, be it in the title, the author, or the donor organization field.

Codes are appropriate for proper names when hierarchical relationships are required. Geographic codes are an example of this. An ideal situation would be one in which geographic locations could be retrieved at several levels, e.g.:

SA0	South America
SA1	Argentina
SA2	Brazil
SA2.1	Northeast
SA2.11	Para

c. Maintenance and Use. The non-subject authority files will be used to control input at the conceptual level, and to provide on-line validation of a field's content to maintain file integrity (Exhibit II-9).

Changes to authority files will be made periodically, either by adding to the list or by changing/deleting. The changes and deletions will be performed in the authority file and will be reflected in the data base by the use of a global modification. The decision to change an authority file or to create a new authority file should be made by a group, not by an individual. While it is important to remain responsive to the users, it is difficult for a single user to perceive how the suggested change will affect the system as a whole. (See Exhibit II-10.)

In both subject and non-subject authority files it is important to remember that careful, thorough cataloging requires more input time, but should save searching time. If the various authority files are allowed to become so lengthy and confusing that the cataloging cannot be performed in a consistent manner, the burden of retrieving information falls entirely on the searcher.

Exhibit II-9
 Non-Subject Authority File Maintenance

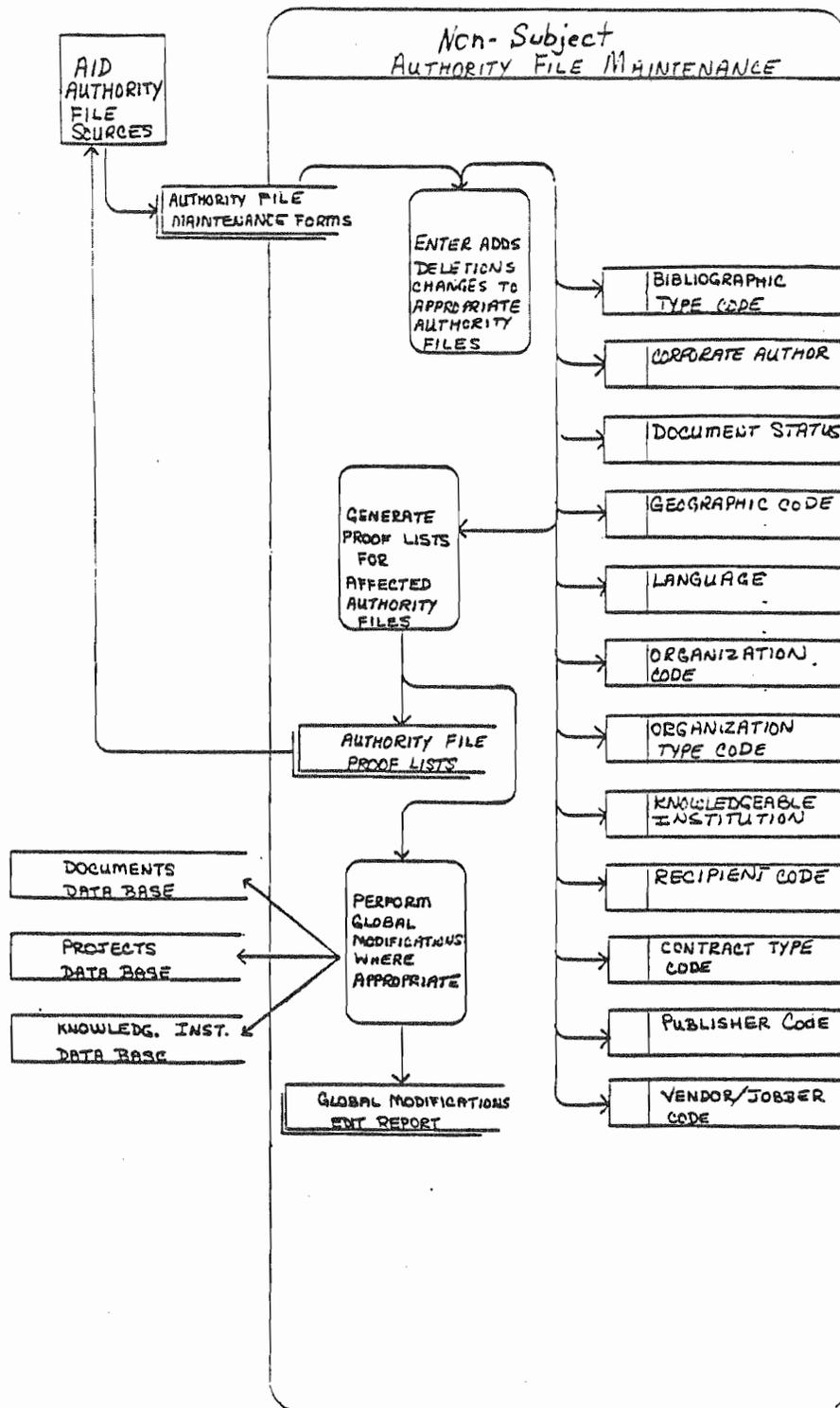
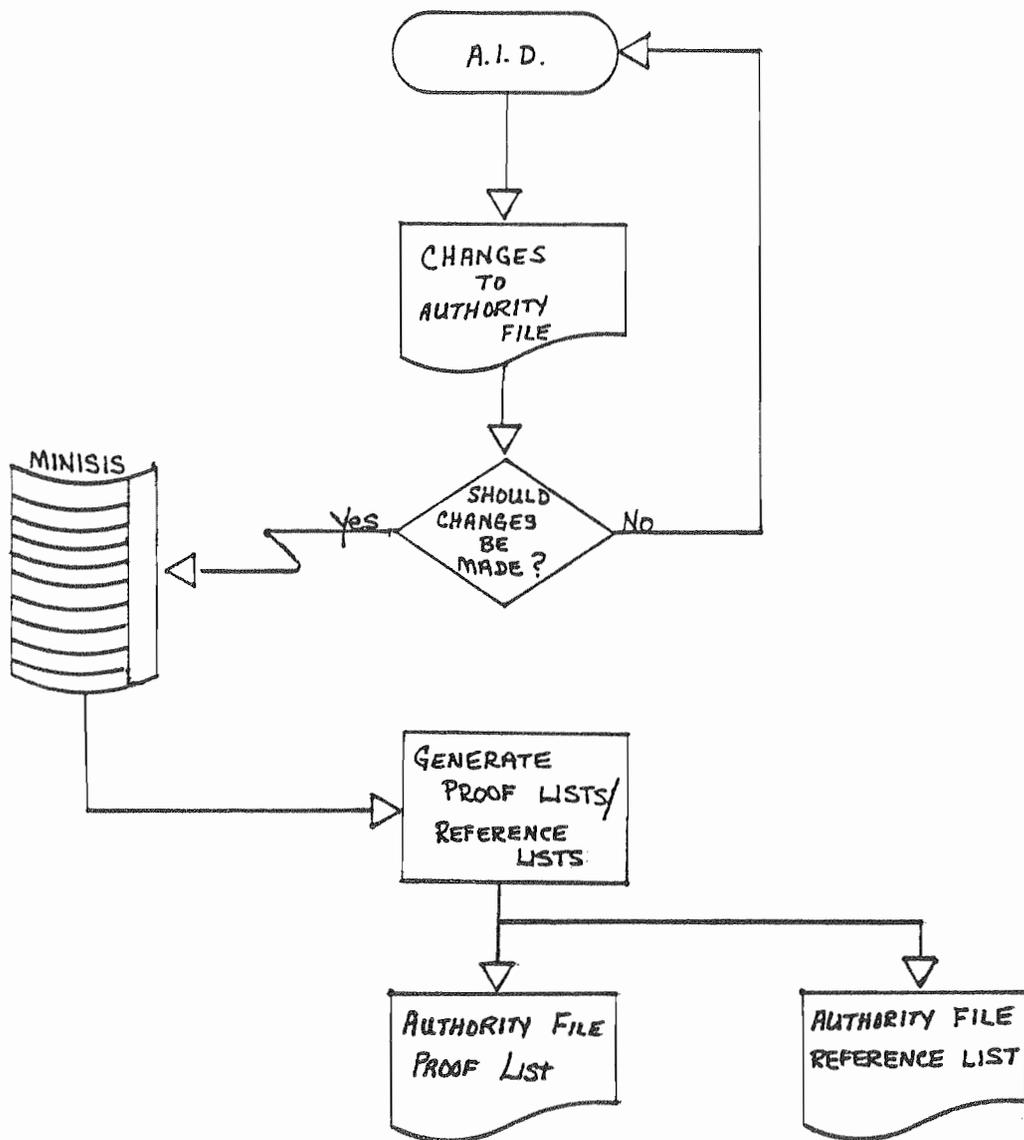


Exhibit II-10
Procedure for Changing Non-Subject Authority Files



F. Processing.

DIS/DIU has several existing information processing systems established to maintain bibliographic control and to provide access to its collections.

1.1 A.I.D. Document Processing.

a. Definition/Purpose. A.I.D. project documents are processed into one of the following data bases:

- o Development Information System (DIS)-Containing two basic files (BREF and TEXT) which provide abstracts and citations of A.I.D. projects and evaluations
- o Research and Development Data Base (RANDD)-Containing research and development materials produced by A.I.D. or under A.I.D. sponsorship.

The purpose of A.I.D. project document processing is to create unique, retrievable, bibliographic records for both documents and document-related institutional and contractor references.

b. Current Status. Currently, project documents receive pre-selection and classification at DIU and are then boxed and sent to a contractor (LTS) for further classification, cataloging, and abstracting. Resolution of problems, such as the receipt of duplicates, documents presenting numbering problems, and documents which are not easily typed or classified, often require a substantial investment of time by the abstractor. Another problem is that although DIU is in receipt of a particular document, no record of that document is accessible on the DIS until it has

passed through all the stages of processing prior to transmittal. The following table portrays the current status.

A.I.D. DOCUMENTS PROCESSED (BREF/TEXT/RANDD)		
OCT 80-SEPT 81		
	Oct	Sept
	1980/1981	
Total abstracts produced (7 abstracts/project; 1 abstract/bib)	5791	
Total projects abstracted	548	
Total bibliographic items abstracted	2104	
A. Evaluative reports	779	
B. Other bibliographic types	405	
C. ARDA Documents	374	

c. Proposed Approach.

(1) Benefits of Onsite Processing. An onsite processing system will be established to facilitate the current mode of operation and to lower per unit production costs. Its major advantages will be:

- o An on-line inventory of documents retained by the contractor will be automatically created;
- o A.I.D. users will have a bibliographic entry on the system, while full technical processing is being completed;
- o Replicative efforts in document handling will be minimized;
- o A computer-generated facesheet will be attached to document, which would aid in tracking the document through the various processing stages;
- o The abstractor will be able to dedicate time to the analysis of a given document;
- o The length of time that documents are held by the contractor will be reduced;
- o A document tracking system will be initialized to permit determination of the stage of document processing.

Additional advantages of a centralized acquisitions/document processing operation include daily contact with A.I.D. personnel, physical access to project files, and ready availability of PBAR and other code lists useful in the preparation of descriptive cataloging entries.

d. Data Base Support Requirements. The Target Acquisitions Data Base and the Documents Tracking Data Base (PS) are the two system features which will support information processing functions. These two data bases will facilitate collecting of information concerning future documents. Once data are captured, the Target Acquisitions Data Base and Documents Tracking Data Base will track data through the various processing phases included therein. For a more detailed description of these data bases, see Sections II.A.4. and II.B.4.

1.2 Non-A.I.D. Document Processing.

a. Definition/Purpose. The collections of the A.I.D. Reference Center and Development Information Center are cataloged and classified to maintain bibliographic control and to provide access to the collections. These cataloged materials include A.I.D. and non-A.I.D. project documentation (See next section F.2), commercially prepared books, reports, proceedings and other published materials.

b. Current Status. Materials are being cataloged under an IQC currently held by Costabile Associates, Inc. scheduled to terminate in January, 1982. Materials are cataloged according to the Anglo American Cataloging Rules, 2nd edition, A.I.D cataloging guidelines, and the A.I.D modified Library of Congress List of

Subject Headings. Materials are classified using a combination of FAO AGRIS Codes, Dewey Decimal classification, and author cutter numbers. Two sets of cards are prepared (one set for each of the centers). The shelf list is maintained at Pomponio Plaza East, Room 503, the designated contractor work area to be used for cataloging. According to an analysis by Costabile Associates, Inc., an estimated 1500 items per year require cataloging as indicated in the table below.

	A.I.D.	Non-A.I.D. Commercial	Total
OCLC	315 (21%)	405 (27%)	720 (48%)
Original	<u>735</u> (49%)	<u>45</u> (3%)	<u>780</u> (52%)
Totals	1,050 (70%)	450 (30%)	1,500 (100%)

The RFP estimated that 2500 items per year would require cataloging (1,000 commercial titles; 1,500 non-copyrighted and A.I.D.-generated books).

(1) Cataloging Backlog. A sizable collection of uncataloged documents are presently unavailable to users. The Development Information Center has an estimated 2000 items currently being processed and cataloged by Costabile Associates. These titles are being entered into the OCLC system and are expected to be completed by the end of January, 1982. Cards are also being filed in the card catalogs of the two centers.

An extensive backlog of uncataloged documents is being stored by the A.I.D. Reference Center. These materials have not been checked against the card catalog to determine whether the

items are duplicates or require entry into the data base or original cataloging. One estimate suggested the backlog included 70,000 items, 20,000 of which were unique and required processing or cataloging. Given its size, priorities need to be established with regard to processing this backlog.

It is recommended that any effort to work off the backlog be deferred until such time as the Thesaurus is available in order to avoid duplicate processing of materials. Once the controlled vocabulary is established and in use, the access problems created by several authority lists should be eliminated, and the A.I.D. materials could be added directly to the MINISIS system.

c. Proposed Approach. The DIHF will continue the present established procedure of cataloging selected A.I.D. reports and non-A.I.D. materials using the OCLC system. This procedure should be reevaluated as soon as MINISIS is operating and the new Thesaurus is available for assigning unified subject descriptors. It is recognized that all A.I.D. materials which are cataloged via OCLC will potentially receive duplicate processing: OCLC cataloging and MINISIS processing. This duplicate processing should be discontinued as soon as the Thesaurus is available to provide unified indexing and better access to cataloged materials.

Several issues require resolution concerning the decision of cataloging into OCLC and/or MINISIS. A.I.D. is just beginning to enter data into the OCLC system, although it has been previously used for identification and verification.

It is important to realize that MINISIS was developed using UNISIST standards and is not easily converted to the MARC

format for automated bibliographic exchange. The incompatibility of MINISIS and MARC is crucial to the decision of entering commercial publications into the MINISIS system. To perpetuate both OCLC and MINISIS locks A.I.D. into a continuous problem of duplicate processing. The possibility of exchanging tapes and cooperative networking is further complicated by the MINISIS/MARC problem.

The original RFP made no mention of exchange of document data bases with U.S. Government Libraries, OCLC, or other domestic organizations which use the MARC format for automated bibliographic exchange.

The original RFP did mention international dissemination of data bases to LDC's. United Nation organizations have recognized the need for a standard international bibliographic exchange format for this purpose and created ISO-2709 (supported by MINISIS). The system as it now stands will accept and disseminate data bases in this format.

UNISIST is accepted internationally as a cataloging methodology and is the underlying basis for the MINISIS structure (internal). A MINISIS/UNISIST/ISO to MARC conversion could be expensive, time consuming, and technically stretching the limits of automated conversion. Due to their basic philosophical design, record by record, field by field conversion from UNISIST/ISO to MARC could be costly. If MARC is to be a real requirement for A.I.D., a feasibility study, requirements analysis and functional specification should be carried out separately from this project. Since the A.I.D. target user community consists of specialists

who are often untrained information users, ease of access, and timeliness of information should be a priority of the system design.

d. Data Base Support. The proposed operation plan does not impact on the data base system design at this time. The DIHF will re-evaluate system requirements once the Thesaurus has been developed and the exchange of bibliographic data is more clearly defined.

It is our plan to develop a Documents Data Base which will contain all the fields found in the Documents Data Base (Projected Subset) that are used for cataloging, indexing, abstracting, file maintenance and searching. Proposed data elements are presented in Exhibit II-11.

e. Implementation. The DIHF will assume the cataloging functions presently performed by Costabile Associates, Inc. It is our understanding that we will assume this function on January 29, 1982 upon expiration of the IQC.

2. Analysis/Abstracting/Editing.

a. Definition/Purpose. The purpose of the abstracts of A.I.D. project and technical (R&D) documentation is to give the user of the A.I.D. information system substantive access to A.I.D.'s development experience in order to improve the design, implementation, and evaluation of future development activities.

b. Current Status. Upon receiving the document to be abstracted, the abstractor writes a summary of the document's salient information, producing an abstract which is concise, illustrative, and useful. To ensure that the abstract is of the highest quality, it is thoroughly edited for the fidelity of its representation of document information and its style of writing.

Exhibit II-11
Proposed Document Data Base (DOCMRD)

FIELD NAME	MNEMONIC	TAG	T	LENGTH
ISSN	ISSN	A010	-1	9
SHORT TITLE OF SERIAL	STITLE	A030	-1	170
VOLUME	VOLUME	A050	-1	50
VOLUME CAPTION	VOLCAP	A051	-1	10
VOLUME NUMBER	VOLNO	A052	-1	10
VOLUME YEAR	VOLYR	A053	-1	10
VOLUME SUPPLEMENTS	VOLSUP	A054	-1	20
ISSUE	ISSUE	A060	-1	50
ISSUE CAPTION	ISSCAP	A061	-1	10
ISSUE NUMBER	ISSNO	A062	-1	10
ISSUE SUPPLEMENTS	ISSSUP	A063	-1	10
OTHER ISSUE/PART IDENTIFICATION	ISSETC	A070	-1	20
TITLE OF ANALYTIC	ATITLE	A080	-1	400
TITLE OF MONOGRAPH	MTITLE	A090	-1	400
TITLE OF COLLECTION	CTITLE	A100	-1	400
AUTHOR OF ANALYTIC	AUTHA	A110	-1	100
AUTHOR OF MONOGRAPH	MAUTH	A120	-1	100
AUTHOR OF COLLECTION	CAUTH	A130	-1	100
AFFILIATION ANALYTIC	AFILA	A140	-1	360
AFFILIATION MONOGRAPH	AFILM	A150	-1	360
CORPORATE AUTHOR ANALYTIC	CORPA	A170	-1	360
CORPORATE AUTHOR MONOGRAPH	CORPM	A180	-1	360
CORPORATE AUTHOR COLLECTION	CORPC	A190	-1	360
PAGE NUMBER ANALYTIC	PAGENA	A200	-1	80
DATE OF IMPRINT/ISSUE	DATEI	A210	-1	100
LANGUAGES OF TEXT	LANTEX	A230	-1	25
PUBLISHER	PUBL	A250	-1	200
ISBN	ISBN	A260	-1	20
EDITION	EDTN	A270	-1	100
COLLATION/NON-SERIAL	COLNSC	A280	-1	100
COLLATION/MONOGRAPH	COLLAM	A290	-1	100
MEETING	MEETN	A300	-1	400
LOCATION OF MEETING	MLOCAT	A310	-1	50
DATE OF MEETING	MDATE	A320	-1	50
REPORT NUMBER	REPNO	A390	-1	30
NTIS ACCESSION NUMBER	NTISAC	A391	-1	20
ORGANIZATION CODE	ORGCD	A400	-1	4
ORGANIZATION TYPE	ORGTYP	A410	-1	4
AVAILABILITY	AVAIL	A430	-1	100
NUMBER OF REFERENCES	NUMREF	A450	-1	8
BIBLIOGRAPHIC TYPE	BIBTYP	B050	-1	2
ABSTRACT	ABSTR	B070	-1	2000
SUBJECT DESCRIPTORS	SBJDES	B080	-1	400
LC CARD NUMBER	LCCARD	B600	-1	10
LOCATION	LOC	B610	-1	10
LOCAL CALL NUMBER	CALLN	B620	-1	20
ARDA PUBLICATION DATE	ARDAPD	B700	-1	10
ARDA ITEM NUMBER	ARDAIN	B710	-1	3
ARDS PUBLICATION DATE	ARDSPD	B720	-1	4
CRLD PUBLICATION DATE	CRLDPD	B730	-1	1
DOCUMENT STATUS	DOCTST	B740	-1	1
AUDIT CONTROL	AUDIT	B750	-1	8
DOCUMENT ID NUMBER	DOCID	B800	-1	13
AID CONTRACT NUMBER	CONTN	B810	-1	21
AID CONTRACT TYPE	CONTT	B820	-1	1
CONTRACT PERIOD	CONTPD	B830	-1	20
EVALUATION PERIOD	EVALPD	B840	-1	10
PROJECT NUMBER	PROJCT	B920	-1	20
NOTES	NOTES	B950	-1	100

The abstractor uses a different approach when abstracting each of the five major document categories: analytical, evaluative, annotative, indicative, and informative. These approaches are used, respectively, in the analysis and abstracting of project design, implementation, and evaluation documents, in addition to research and development documents.

(1) Project design documents. For design documents, the analytical approach is employed, describing in separate fields (based upon the logical framework (logframe) format**), the project's ultimate goal, specific purpose, inputs, and targeted outputs. The abstractor also describes the development problem. A summary project description is then prepared, detailing the project's overall design, management, activities, and intended results. Writing the summary involves analysis and abstracting in the strictest sense--condensing lengthy or diffuse material, differentiating essential from peripheral data, and often interpreting and expressing an overall structural unity left implicit in the document. The summary statement can be no longer than 2,160 characters, which is usually less than 400 words. Finally, the abstractor enters the project summary goal, purpose, inputs, outputs, problem and strategy statements onto the TEXT database.

**As some design documents lack a logframe, the abstractor must create one based upon his/her interpretation of the document. The invented logframe's goal, purpose, and outputs are followed by an "(I)". A logframe that exceeds the allotted data element space forces the abstractor, who is unable to enter the entire logframe, to condense it, sometimes omitting clarifying information and entire outputs. In addition, projects which ambitiously entail extensive and disparate activities must be divided into subprojects, with abstracts and PROJECT9's created for the major functional divisions.

(2) Evaluation documents. Evaluative abstracts summarily describe the project as executed. This comprehensive abstract describes the project's achievements and/or failures; implementing agent activities; factors affecting the project; and evaluation methodology and period, and lists any lessons learned or recommendations and implications for the continued or future implementation of this or other projects. These abstracts, along with the document cataloging information, are entered on BREF.

This summary is limited to 2,160 characters, which is usually less than 350 words. The abstract's limited length, compared to the often extensive evaluative activities and information, forces that abstractor to omit information that is potentially user-valuable.

(3) Project implementation and non-R&D Documents. Contracts, work orders, project implementation orders and bibliographies are annotated. Annotative abstracts are characterized by abbreviated phrases which often describe only the document's table of contents. Such abstracts describe the type of funding involved (grant, loan, etc.), the name of the contractor, and the specific project task for which the contract was awarded, and are recorded on BREF. Other A.I.D. documents which are annotated include project amendments and extension documents, information from which is entered on TEXT, while the catalog information is entered on BREF.

(4) Indicative abstracts are used for documents such as feasibility studies and task force reports which, while substantive, are neither project design/evaluation nor research and development documents. Indicative abstracts can be described as an expanded table of contents approach that presents the core meaning of a document without excessive detail.

(5) The informative abstract is used for research and development documents which are published in ARDA and entered on RANDD. These documents involve highly technical subject matter: For example, plant research or the use of mathematical analysis. The informative nature of R&D abstracts emphasizes the more substantive evaluative approach while including the document's overall content in the annotative style. The abstractor is allowed greater flexibility in abstracting R&D documents than with other document types. Generally, these informative abstracts also contain a brief description of the development research activity outlined in the article and the author's main points.

The editorial process for abstracts of all five document types begins with an inspection of the abstract to ensure that the substance of the document is adequately reported, the structure of the project is apparent, and the abstract itself is lucid, concise, and stylistically correct. The abstract is further edited to ensure that it is accurate, well written, and free of typographical errors.

c. Proposed approach. The above approach to abstracting will be refined and to a certain extent altered under the DIHF,

yet will comply with the basic principles stated above. Proposed new emphases and inclusions in the abstract are as follows:

- o Impact upon a clear area of concern should be described as such;
- o Assumptions which are directly crucial to the project and are potentially faulty should be mentioned;
- o Cost in analyzing projects should not be underestimated. The cost of a particular project activity is useful for purposes of comparison and subsequent evaluation.

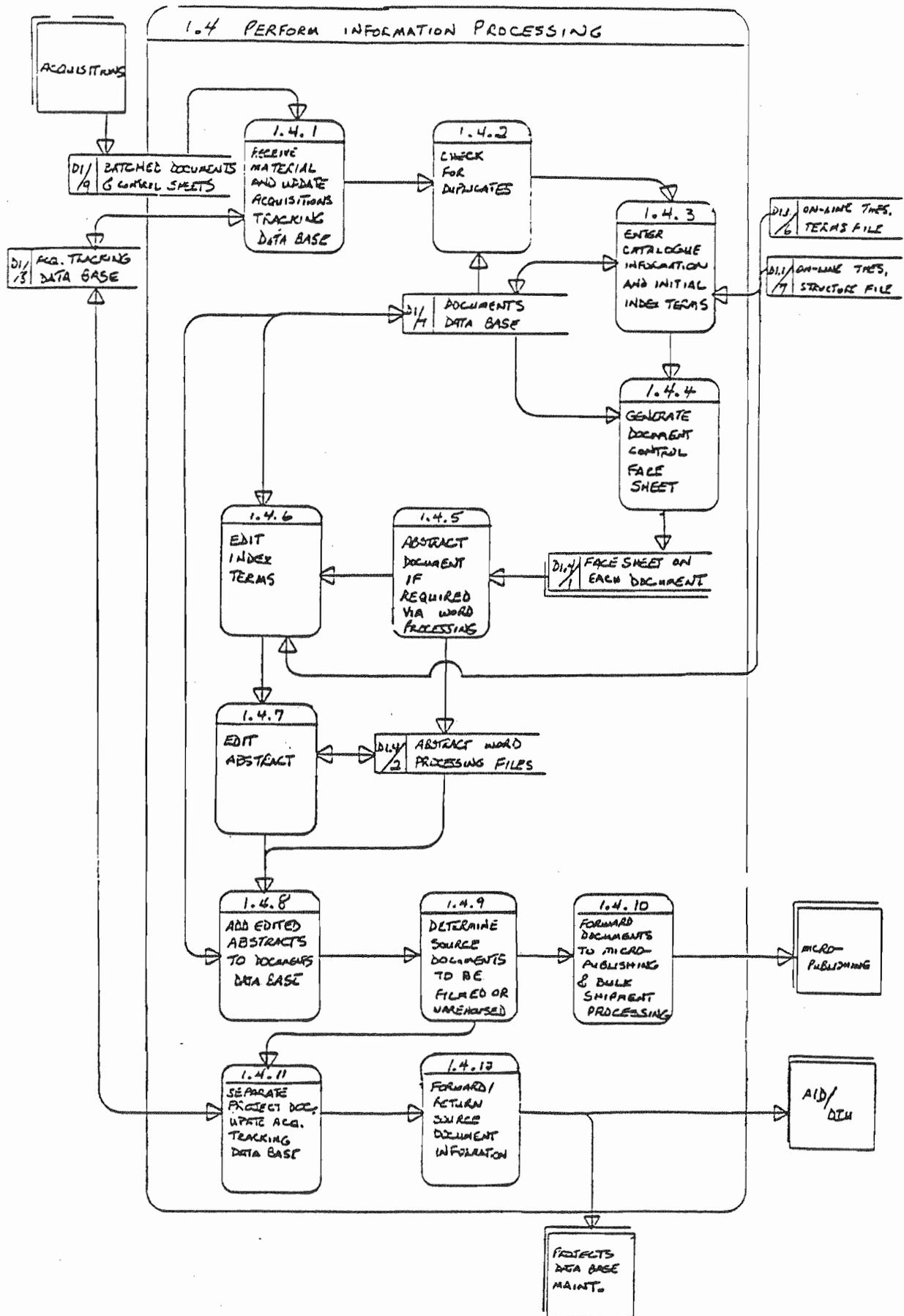
Formatting changes will be made to accommodate improvements in data base design, eliminate unnecessary repetitions of information entry, and save time and costs. (See Exhibit II-12)

The major structural change in formatting abstracts is that the artificial separation of TEXT and BREF will be eliminated. All abstracts will be tied to documents. The following is a proposed new format for the abstracts of both design and evaluation documents. General project data will be available on the BASIC PROJECT DATA sheet (q.v.).

(1) Proposed One-Abstract Format For Project File.

(a) Description of the Existing System. Under the present A.I.D. database management system, seven abstracts are used to describe a project. This format leads to repetition of information and complications in formatting informational reports for users. Under the DIHF these difficulties will be eliminated and the whole process of retrieving project information will be simplified by the use of a single abstract for project description. Use of the one-abstract format will also lessen the amount of time needed to prepare and enter a project on the TEXT file.

Exhibit II-12
Information Processing



(b) Proposed System Modification. The file containing the proposed detailed project description, which will be termed SUMMARY, will include a variable length subfield consisting of the first two or three sentences of the SUMMARY. This short statement can be thought of as a project OVERVIEW. The OVERVIEW will contain the following information: project purpose or major output and country; the development problem addressed by the project; and the implementing agency, where applicable.

(c) Benefits Realized. The user will be able to retrieve either the entire SUMMARY or only the brief OVERVIEW section. Especially in view of the limitations in screen size, this capability will be helpful in preparing replies to information requests, since it will permit quick review of the basics of several projects. Such a capability will also prove useful in producing other user-oriented information products, annotated bibliographies, and quick response packages.

Exhibit II-13 compares the existing seven-part abstract to five examples of our proposed two-part single abstract. All versions are based on combinations of the PROBLEM, STRATEGY, and SUMMARY descriptions of project abstracts already on DIS. In the current system these three sections together total 500 words on the average--the equivalent to the word limit required by A.I.D. for the DIHF.

(2) Proposed Revision Of Evaluation Abstract. The proposed revision consists of the elimination of the currently-used initial paragraph of the abstracts. In order to keep a record of the pertinent information contained in this paragraph, the three

Exhibit II-13
Current Seven Abstract Format

PROJECT# 511045100
TITLE Basic Foods Production and Marketing
GOAL# To increase per capita income/standard of living of rural poor.
Subgoal. Increased production of basic food crops/livestock among small farmers in the valleys of Central Bolivia and the developing lowland areas of Eastern Bolivia.
PURPOSE# 1. Technology Development. To develop improved technologies for use by small farmers in valleys of Central Bolivia and Eastern agricultural lands. 2. Technology Extension. To extend the improved technologies to small farmers in target areas. 3. Sector Management. To develop the capability of the Ministry of Agriculture and Rural Affairs (MACAG) Offices of Economics and Statistics, Marketing, and Planning to plan and implement coordinated programs/policies for the poor.
OUTPUT# 1. Technology Development. A. Research on small farmer crop/livestock production, some conducted in conjunction with San Simon and Gabriel Rene Moreno Universities; B. Project-related university theses; C. Curricula studies; new/improved courses; D. Division of Research and university personnel/students trained. 2. Technology Extension. A. Field Demonstrations on research results; B. Short courses for campesinos; C. Research/extension bulletins distributed; D. Extension personnel trained. 3. Sector Management. A. Offices of Planning, Marketing, and Economics and Statistics personnel trained; B. Manual and coordinating mechanism developed for MACAG; C. Study on organization/administration of sector services.
INPUT# 1. A.I.D. A. Grant-financed long-term assistance; B. Loan-financed short-term consultants; C. Grant-financed participant training (PT) of MACAG personnel; D. Grant-financed commodities (vehicles, office equipment, consultant supplies); E. Other costs (travel, per diem, housing, education, local self-help, Utah State University agricultural study). 2. Government of Bolivia. Salaries/operating expenses, PT, contribution to feasibility studies. 3. Other donors. Possible participation of the UNDP and/or IDB in financing technicians.
PROBLEM Bolivia's central valley and eastern lowland areas, where the country's small farm subsector is concentrated, has the potential for producing basic crops and livestock products increasingly needed to satisfy Bolivian nutritional needs. Development of this subsector is being hindered by the lack of development and delivery of modern agricultural technologies and by inadequate public provision of sector services, especially by the Ministry of Agriculture and Rural Affairs.
STRATEGY Three-Year Project consists of a Grant to the Government of Bolivia to finance technical assistance (also to be financed through Agriculture Sector Loan I), participant and other training, and commodities, for the development and extension of small farm technology, and for the upgrading of Government of Bolivia sector services. GOB will provide counterpart funds. Other possible donors include the U.N. Development Programme and the International Development Corporation.

Exhibit II-13 cont'd
Current Seven Abstract Format

SUMMARY Grant is provided to the Government of Bolivia to increase production of basic food crops and livestock among small farmers in the central valley and eastern lowland areas. Project consists of development and delivery of improved small-farm technologies, and upgrading of the capacity of the Ministry of Agriculture and Rural Affairs (MACAG) to plan and implement sector services. MACAG will implement the project with the help of grant-financed long-term advisors, and short-term advisors available through Agriculture Sector Loan I. MACAG will establish three Regional Service Centers, each with Divisions of Research, to research critical production problems in the small farm subsector. Consultants will work with the Divisions of Research and with professors from the Universities of San Simon and Gabriel San Moreno in research projects, and will teach university courses and advise students on project-related theses. Studies to improve university curricula will be conducted and 20 new or improved courses will be developed. Field demonstrations will be carried out on research results. Small farmers will receive research and extension bulletins, and will also be given short courses on research results, improved management practices, and the uses of credit, fertilizer, and equipment. A study of the organization and administration of public sector services provided by MACAG and others will be conducted. Manuals and procedures will be developed for MACAG's Offices of Economics and Statistics, Marketing, and Planning, e.g., by creation of services in marketing information, production data, and sector planning and socioeconomic analysis. An internal coordinating mechanism for these offices will also be developed. Personnel from the above-named MACAG Offices, as well as from the Divisions of Research and the Department of Extension, will receive participant training at the M.S. and Ph.D. levels, as well as in-service training and short courses. The same types of training will be made available to university personnel. It is expected that a total of 120,000 small farmers will benefit directly or indirectly from the project.

Exhibit II-13 cont'd
Sample Two-Part Single Abstract

Project 511045100: Basic Foods Production and Marketing

SUMMARY

OVERVIEW: Project to increase the production of basic food crops and livestock needed to satisfy Bolivia's nutritional needs. Project consists of developing and delivering improved small-farm technologies to farmers in the potentially fruitful central valley and eastern lowland areas, and upgrading of the capacity of the Ministry of Agriculture and Rural Affairs (MACAG) to plan and implement sector services. MACAG will implement the project.

With the help of long-term technical assistance and short-term advisors from Agriculture Sector Loan I, MACAG will establish three Regional Service Centers, each with Divisions of Research, to research critical production problems in the small farm subsector. Consultants will work with the Divisions of Research and with professors from the Universities of San Simon and Gabriel San Moreno in research projects and will teach university courses and advise students on project-related theses. Studies to improve university curricula will be conducted, and 20 new or improved courses will be developed. Field demonstrations will be carried out on research results. Small farmers will receive research and extension bulletins and will also be given short courses on research results, improved management practices, and the uses of credit, fertilizer, and equipment. A study of the organization and administration of public sector services provided by MACAG and others will be conducted. Manuals and procedures will be developed for MACAG's Offices of Economics and Statistics, Marketing, and Planning, e.g., by creation of services in marketing information, production data, and sector planning and socioeconomic analysis. An internal coordinating mechanism for these offices will also be developed. Personnel from the above-named MACAG Offices, as well as from the Divisions of Research and the Department of Extension, will receive participant training at the M.S. and Ph.D. levels, as well as in-service training and short courses. The same types of training will be made available to university personnel. It is expected that a total of 120,000 small farmers will benefit directly or indirectly from the project. Possible other donors include the U.N. Development Programme and the International Development Corporation.

Exhibit II-13 cont'd
Sample Two-Part Single Abstract

Project 931125000: Non-Formal Education Network

SUMMARY

OVERVIEW: Project to expand the program of Michigan State University's (MSU) Nonformal Education (NFE) Information Center aimed at providing information and technical assistance to LDC's. Project is a follow-on to Project 931099600.

MSU will continue publication of the quarterly "NFE Exchange", expanding its content to include previously unpublished NFE articles, and increasing its distribution in LDC's. LDC requests for NFE publications and resources will continue to be answered on a personal basis. In addition, selected annotated bibliographies dealing with NFE in specific areas, such as health, functional literacy, or agriculture, will be developed and distributed; and a collection of fugitive documents will be maintained. A systematic evaluation study of the activities of the MSU Center will be conducted in order to examine NFE trends and issues, assess the development impact of the Center's activities, and learn about the characteristics of NFE network participants and the nature of their relationships with the Center. The major new thrust of the project will be the provision of direct technical assistance to LDC's--in the target areas of Latin America, Asia, Anglophone and Francophone Africa, and the Middle East--in creating indigenous NFE centers. An important feature of this assistance will be the provision of a basic stock of NFE materials reproduced from the MSU collection to enable LDC centers to assume many of the services provided in the past by MSU. LDC centers will specialize in NFE information relating to the national and regional area and prepared in national and local languages, thus facilitating greater sensitivity to varying local needs. Finally, MSU will produce, in cooperation with these LDC centers, a guidance manual detailing how to establish, manage, and evaluate NFE information centers. This manual will serve as a model for additional LDC information center activities. Amendment of 8/1/80 to MSU's statement of work provides additional funds to strengthen the Women in Development (WID) component of NFE project. MSU will continue coverage of WID projects and issues in the "NFE Exchange", the quarterly newsletter published and distributed worldwide by MSU; assess the source, frequency, kind, and extent of inquiries regarding women in development reaching the MSU Nonformal Education Information Center; respond to WID-related requests for information and inquiries from development planners and practitioners; build a WID component for select NFE Information Centers in LDC's that will be involved with this project; and conduct networking activities focusing on the needs of women in development.

Exhibit II-13 cont'd
Sample Two-Part Single Abstract

Project 695010300: Alternative Energy Peat II

SUMMARY

OVERVIEW: Project to develop the use of peat as an alternative energy source in Burundi and to strengthen the institutional capacity of the implementing agency, the National Office for Peat (ONATOUR), a parastatal organization, to carry out peat development programs. The project aims at averting an imminent Burundi energy shortage due to extensive deforestation caused by accelerating consumption of fuelwood, traditionally the country's primary cooking and heating energy source.

ONATOUR's institutional capabilities will be upgraded by on-the-job training of indigenous staff members in peat analysis, drainage and reclamation, mechanics, management, accounting, and marketing. Specialized technical, financial, and marketing training will take place in the U.S., Ireland, and other African countries. Six bog managers will be trained to organize machinery use and production, direct peat cutting and drainage work, supervise drying and storage, and handle on-site peat sales. Preventive and corrective maintenance of the macerating machines will be done by the 4-8 mechanics to be trained. Two accountants, two marketing specialists, 4-6 field surveyors, 2-4 laboratory technicians, and a general engineer will be trained. A total of four division chiefs in production, marketing, finance, and administration will also be recruited and upgraded in their skills. An effective accounting system will be developed to improve ONATOUR's management capability. Technical questions about peat production methods will be resolved by testing a semi-automatic macerating machine's ability to process the high percentage of undecomposed fibrous material found in Burundi peat. Studies indicate that each machine can produce about 920 tons of dried sod peat annually, for a project total of 41,400 metric tons, using 45 machines. A model peat-burning cooker/stove suitable for rural and urban home use will be designed and tested. The inexpensive peat stoves will then be manufactured locally. Six commercial bogs will produce peat for the urban domestic, institutional, and industrial commercial markets. Under this project, the bogs will reach an annual production level of 47,500 metric tons by 1986. Once all of Burundi's commercially exploitable bogs are fully operating, annual production will reach 57,000 metric tons. Other donors include the Government of Ireland and the IBRD.

Exhibit II-13 cont'd
Sample Two-Part Single Abstract

Project 276000300: Agriculture Education-Livestock Production

SUMMARY

OVERVIEW: Project to expand the educational and applied research activities of the Animal Production Department (APD), Faculty of Agriculture, University of Damascus in Syria in the areas of dairy and poultry production. The project will develop research programs and a livestock production curriculum within APD in order to develop an in-country capacity to provide technical and managerial experts for Syria's livestock sector. ADP will implement the project with technical assistance from USAID and the University of Nebraska.

@University of Damascus laboratories and farms will be upgraded. An animal nutrition and analytical laboratory and poultry and dairy production units will be constructed for instructional and applied research purposes. A feed mill will also be built and all facilities will be equipped. APD staff will be trained to properly operate and maintain the facilities and equipment. Laboratory procedures will be introduced into the curriculum. The Faculty of Agriculture Library will be provided with literature and staffed with a librarian. @APD faculty will also be upgraded and expanded to 16 members. Six faculty members who received graduate degrees in countries other than the United States will take part in 1-year U.S. post-doctoral research programs. Four additional faculty members will participate in short-term U.S. refresher study/research programs. Six APD B.S.-degree graduates will receive Ph.D.-level training in the United States and will later join the APD faculty. Short study trips will be given to four selected University of Damascus faculty members and to eight Ministry of Agriculture (MOA) and four APD livestock unit managers. @An M.S. degree program will be established within APD. The APD curriculum will be improved to provide more practical education (i.e., farm management techniques) and will be offered to 3,500 Faculty of Agriculture undergraduates. An expected 50 students will graduate annually with B.S. degrees specializing in animal production; 35 with Diploma degrees (1-year post B.S. graduates); and 50 with an M.S. in animal production. @Applied research will become a part of the graduate program and will be used to develop appropriate technology for the livestock industry. Joint APD/MOA/state livestock unit programs will also be encouraged so that APD educational and research activities can be utilized country-wide.

Exhibit II-13 cont'd
Sample Two-Part Single Abstract

Project 931101200: Int'l Center for Diarrheal Diseases Res

SUMMARY

OVERVIEW: Project to assist in financing a multi-donor project to establish, in Dacca, Bangladesh, an International Center for Diarrheal Disease Research (ICDDR). ICDDR will continue and expand the work of the Cholera Research Laboratory, whose charter is about to expire, in combatting the diarrheal diseases which debilitate many and are often the prime cause of sickness and death in LDC's.

@The independent and non-profit ICDDR, chartered and located in Bangladesh, will concentrate on research activities to be conducted by multidisciplinary Working Groups (WG), and will also provide pure and applied research training, consult with LDC and developed country health institutions, and advise on public health interventions. @A Disease Transmission WG will study chronic, childhood, parasitic, and travellers enteric diseases with emphasis on two key pathogens, "V. cholerae" and "E. coli". A Host Resistance WG will work on vaccine development, intestinal immunity, and non-specific resistance to infection. A Diarrhea Pathogenesis and Therapy WG will research the pathogenesis, complications, and treatment of diarrhea, dysentery, and Rotavirus disease. The Population WG will emphasize demographic surveillance, reproductive endocrinology, the determinants of fertility and mortality, and their reaction to outside intervention. The Nutrition WG will analyze feeding practices, food wastage, breast-feeding, and the epidemiology of malnutrition. @Development of the 719-member staff (402 of whom will be research scientists, doctors, and technicians) through in-country/foreign technical, M.S., and Ph.D. education will be a key objective. Other training will include graduate and post-doctoral research fellowships and workshops on special topics such as oral rehydration. Outreach programs will respond to requests for assistance from public and private, national and international agencies. @ICDDR laboratory, animal research, library, publishing, data processing, and administrative facilities will be located in offices at the Institute of Public Health. Treatment/research centers will operate in Dacca, Matlab (serving 250,000), and Teknaf (serving 80,000). The construction of critically needed facilities and the purchase of a small computer, laundry and sterilization equipment, and four buses will also be funded by the project. @Amendment of 8/15/79 authorizes increased FY 1979 funding to allow research activities to continue in the period after termination of bilateral assistance to the Cholera Research Laboratory but before start-up of direct assistance to the ICDDR.

key information elements will be distributed elsewhere, as follows:

(a) Project Purpose. The OVERVIEW from the SUMMARY PROJECT DESCRIPTION will be displayed prior to the evaluation abstract. For cases where no such OVERVIEW exists, it has been suggested that the Congressional Presentation (back issues of up to 15 years would have to be permanently available to abstractors) be used to create a design document abstract. In those few cases where this option could not be exercised due to lack of documentation, a "dummy" overview could be "invented" or the information item could simply be omitted altogether, being inferable in any case from the project title (as expressed in the document title) and the ensuing abstract.

(b) Evaluation Period. This information will now be available through the new EVALPRD entry in the revised format given above.

(c) Evaluation Methodology. This information will be expressed in the future--as it already is, but only partially--through evaluation document DESCRIPTORS (q.v.)

(3) Abstracting of Technical Literature, Editing.

The policy and format of abstracting Technical ("RANDD") Documents and current editorial policy and practice will remain unchanged under the DIHF.

3. Indexing.

a. Definition/Purpose. Indexing entails selecting terms (Descriptors) from a controlled vocabulary list (thesaurus) and choosing project and geographical codes from authoritative listings.

b. Current Status. Currently three separate descriptor lists and 16 non-subject authority code lists (see Section II.D for Non-Subject Authority Files) are used to index A.I.D. and non-A.I.D. documents. The three descriptor lists are: the DIS Thesaurus; the RANDD Descriptor List; and the A.I.D. modified Library of Congress Subject Headings. The abstractor selects from the DIS Thesaurus for records on TEXT (for project design documents) and on BREF (for project evaluations, expertise references, and other bibliographic entries). On TEXT, up to 40 descriptors indicating the major aspects of the project are selected and prefixed with an index number to indicate those which pertain to project purpose, output, problem, or a combination thereof. On BREF, up to 20 descriptors are selected to describe document content, knowledgeable institution characteristics, and evaluation methodology, as applicable. Priority among descriptors entered on BREF records is not indicated. On RANDD, up to 26 descriptors are chosen from the RANDD Descriptor List to describe key concepts or applications embodied in research and development documents.

The coding facet of the indexing process involves selection of relevant codes from A.I.D.-authored Purpose, Technical, and Special Concern Code lists to convey important project concepts. Purpose Codes describe a project's primary focus; Technical Codes refer to the technical fields involved in a project; and Special Concern Codes relate to a project's relevance to various Congressionally-mandated or A.I.D.-determined priorities. One code in each of the first two categories is mandatory and must correspond to those codes appearing on the DIU Master List.

Although only one major project purpose is usually indicated, the indexer may enter additional codes as necessary in any of the categories.

A.I.D. and non-A.I.D. documents which are cataloged through OCLC or original cataloging are assigned subject descriptors from the A.I.D. Modified Library of Congress Subject Headings. Cards are prepared for the center catalogs and include:

- o subject cards
- o added entries
- o contract numbers
- o geographic country code
- o project numbers.

These cataloged materials are not currently in the Inquire system. Non-A.I.D. document processing is discussed in Section II F-1.2.

c. Proposed Approach. Indexing will undergo both substantive and procedural changes under the DIHF. Descriptors and codes will be assigned according to the length and importance of the documentary unit being indexed--if a document's subject content can be adequately conveyed to the user by two or three descriptors and one Purpose and Technical Code, no more will be used. Concepts not deemed necessary to be included in the abstract are not of significant importance to require indexing.

The following changes in the indexing process are proposed:

- (1) Descriptors will be selected from a new, more user-oriented A.I.D. Thesaurus.

(2) A Basic Project Data Descriptor List will be created. When a project design document is indexed, those descriptors chosen will be placed in an expandable Basic Project Data (BPD) field. As additional project documents are indexed and entered onto the system, those descriptors not already appearing in the BPD field will be added to this complete list of project descriptors. However, each individual document record on the DIHF data base will retain a document-specific list of subject matter and document descriptors (cf. 3 and 4 below).

(3) Primary and Secondary Descriptors will be differentiated. Primary Descriptors will be chosen to reflect the major subject(s) of the documentary unit and will be tagged with a special character. Primary Descriptors will also be used to generate subject indices and catalog headings. Secondary Descriptors will be selected to correspond to those concepts expressed in the document which are significant but of relatively less importance.

(4) New "Document Descriptors" will be created to describe types of documents. Among the proposed new Document Descriptors are:

- (a) Annual report;
- (b) Audit report;
- (c) Capital assistance paper;
- (d) Contractor interviews;
- (e) Development program grant;
- (f) Document review;
- (g) End-of-tour report;
- (h) Final evaluation;
- (i) Host country interviews;
- (j) Housing guaranty;
- (k) Interim/progress report;
- (l) Miscellaneous design document;
- (m) Non-capital assistance project paper;
- (n) Non-project experts;
- (o) Operational program grant;
- (p) Project appraisal report;

- (q) Project assistance approval document;
- (r) Project evaluation summary;
- (s) Project paper;
- (t) Sector assessment;
- (u) Special evaluation; and
- (v) USAID personnel interviews.

(5) New "Evaluation Methodology Descriptors" will be created. These terms, developed in consultation with A.I.D.'s Office of Evaluation (PPC/E), will permit a thorough description of evaluation methodology. Among the proposed new Evaluation Methodology Descriptors are:

- (a) Contractor interviews;
- (b) Document review;
- (c) Host country interviews;
- (d) On-site visits;
- (e) Outside experts;
- (f) Standard audit procedures;
- (g) USAID personnel interviews;
- (h) Random sampling;
- (i) Cross-section analysis;
- (j) Case study; and
- (k) Regression analysis.

(6) Preference will be given to the most specific descriptor applicable to the concept. Since information on the DIHF data base is intended to be project-specific, whenever a range of broad to narrow descriptors is available to the indexer, the narrowest term fitting the concept expressed in the document will be indexed. This will not impede document retrieval in any way since the MINISIS software is capable of searching the data base for terms broader than the descriptor queried by the user.

d. Data Base Support Requirements.

1) Indexing. In the indexing process, keywords will be flagged and will be used for subject indexes, SDI operation, on-line searching.

Indexing guidelines will include specific instructions, prepared with A.I.D. (PPC) assistance, for classifying projects into general project type or sector. These keywords will replace the function of purpose and technical codes. We can still have these codes on our data base, but need not rely on them for a primary retrieval path.

The keywords will be entered into a single keyword field, delimited by slashes. The order will be semi-random with keywords, denoting a single concept, joined with words such as "and" or "with" or any other conjunctive phrase designed to elucidate what concepts are being indexed. Such conjunctive words will not be inverted.

Geographic codes/descriptors will be entered in the keyword field, or in a separate geo field with a KSAM authority file. The user will be able to key on geo-code "497" or "Indonesia". The use of "any" tables for "any SE Asia nation" will display all Southeast Asian nations. The "any" tables for a given category will display all the elements in that category. Geographic codes/descriptors, will be published as a subset of the thesaurus or as contents of a geo-code KSAM file.

4. Source Document Filming.

a. Purpose. The DIHF will provide source document filming services for A.I.D. Project and Technical Documents that satisfy A.I.D.'s requirements for responsiveness and high quality. The resulting 1st generation silver masters will be stored off-site under archival conditions, and the 2nd generation silver duplicates

will be integrated into the existing collection and used to produce microfiche duplicates and full-size blowbacks for requestors.

b. Current Status. Initial arrangements have been made with the source document filming subcontractor (REMAC, Inc.), in preparing them to receive A.I.D. documents for filming. Five A.I.D. documents have already been filmed by REMAC and the resulting fiche masters and duplicates have been inspected and approved by A.I.D. staff. We are confident that REMAC will be able to consistently provide source document filming services that will exceed all of A.I.D.'s quality control specifications.

Eight batches of A.I.D. Project Documents that are to be filmed have been received by DIHF staff. As of this writing, one batch has been prepared for filming; this batch will be sent to REMAC for filming pending resolution of several questions (in consultation with A.I.D. staff) that have arisen through preparing these documents for filming.

c. Proposed Approach. Documents to be filmed will be picked up from A.I.D. via DIHF messenger once the documents have been assigned a PN/PD Number. DIHF will assume all responsibilities for source document filming after that point. The steps involved include logging in the documents received; document preparation; generation of magnetic tape to produce the microfiche header; filming of the documents; and return of the 1st and 2nd generation fiche to DIHF and their integration into the respective collections.

When documents are received from A.I.D., a new record will be created in the Source Document Microfilming Log; the following data elements will be entered: date received from

A.I.D.; PN/PD Number; and appropriate condition or quality control notes. The fiche inventory files will also be checked to verify that the document hasn't already been filmed.

Once the documents are logged in, they will be "prepped" for filming. For a full description of the document preparation procedure, see Exhibit II-14. A grid sheet will be prepared as part of the document preparation process which will contain all the header information: PN/PD Number; Title; Country; Project Number; reduction (24x); publication date; contract number; location of documents in fiche; and "1 of 2," etc. This header information from the grid sheet will be used to create a magnetic driver tape for REMAC's LED generated fiche header system.

After generation of the tape, the prepped documents will be logged out. The documents will then be assigned batch, box, and sequence numbers, logged out and date sent to REMAC will be entered in the Source Document Microfilming Log. They will then be delivered to REMAC for filming accompanied by the magnetic tape for generating the headers and a printout listing PN/PN Number, Title, and Batch/box/sequence number for each document sent.

All documents will be filmed by REMAC according to the procedures detailed in a separate report on document filming. A 1st generation silver master and a 2nd generation silver duplicate will be created for each document filmed. Documents and fiche will typically be returned by REMAC within ten working days of receipt, depending on the volume of documents to be filmed and their priority, and the inventory files for 1st generation silver masters and the 2nd generation silver duplicates will be updated.

Exhibit II-14
Document Preparation Procedures for Microfilming

1. Documents sent from DIS/DIU to DIHF for filming.
 - 1.1 Messenger picks up documents
 - 1.2 Logged in - date, condition, quality
2. Documents prepared for filming (see document preparation procedures).
3. Tape prepared with all header information; records in same order as submitted to REMAC.
 - 3.1 MINISIS routine to generate tape.
 - 3.1.1 File automatically generated as a by-product of 1.2 which would then be run against routine to produce tape.
 - 3.1.2 Automatic routine where number of pages entered and MINISIS automatically generates appropriate number of fiche headers with proper sequencing information (1 or 2, etc.).
 - 3.1.3 Specs for REMAC to read tape.
 - 3.1.4 Back-up tape generated.
4. Prepped documents and tape delivered to REMAC.
 - 4.1 Documents logged out; date, box no.; sequence no.
 - 4.2 Documents packed in 1 cu. ft. boxes with each box numbered (all boxes same size for ease of stacking).
 - 4.3 Along with documents is a list of documents delivered (printout of information on header tape)
 - 4.4 days (number not yet designated) between receipt of document at DIHF from DIS/DIU and delivery to REMAC for filming.
5. REMAC films documents.
 - 5.1 Ninety-eight frames/fiche; A-1 is BDS; A-2 is document cover; five-point resolution target follows last frame of document. (If 3 fiche, on 3rd fiche only.)
 - 5.2 Blank pages filmed if in pagination (e.g., if blank page left out would cause reader to wonder when page was, then blank page filmed).
 - 5.3 Header format - LED generated.

Exhibit II-14 cont'd
Document Preparation Procedures for Microfilming

- 5.4 Non-stripped film used for masters.
- 5.5 Only one document per fiche.
- 5.6 For oversize pages:
 - 5.6.1 If 11" high but wider than 8 1/2", then page is shot in two frames and edges are overlapped.
 - 5.6.2 If taller than 11", CSG will either cut original or reduce, depending on type size of original (any type smaller than 4-6 pt. can't be reduced and microfilmed at 24x reduction with acceptable resolution.)
- 5.7 All pages filmed as bound, e.g., vertical charts will remain vertical.
- 5.8 Fiche put in white, acid-free envelopes, one document per jacket. White acid free paper inserted between fiche for multi-fiche document. (Does CSG supply REMAC with jackets?)
- 5.9 Filmed documents (re-packed in boxes in same order) and tape returned to DIHF via messenger.
6. Master and Inter-negative fiche filed in respective collections
 - 6.1 Diazo duplicates made from each new inter-negative and filed in collection.
 - 6.2 On-line inventory file updated for all three collections.

Draft:

A final entry will be made in the Source Document Microfilming Log noting the date returned from REMAC for each document filmed.

d. Data Base Support Requirements. Two MINISIS files and three reports generated from these and other files will be required for the source document filming operations. They are listed and described below:

(1) Source Document Filming Log (file): Data elements to include PN/PD Number; date received from A.I.D.; condition/quality notes regarding document; date sent to REMAC for filming; batch/box/sequence number; and date returned from REMAC;

(2) 1st and 2nd generation fiche inventories (files): These are explained in Section IV-A (Micropublishing) of this report;

(3) Grid sheets: The grid sheets will consist of information drawn from the Documents Data Base combined with a stored form to emulate the 7 X 14 fiche grid format; data elements taken from the Documents Data Base include PN/PD Number, Title, A.I.D. Contract Number, Project Number, publication date, contract number, and Country (taken from Geographical Codes); as the grid sheets are filled in during document preparation, the number of fiche required for the document will also be entered. This will generate the appropriate "1 of 1" or "1 of 3," etc. information for the header. The string "24X" will appear in the headers of all grid sheets. There will also be space to enter the initials of the DIHF staff member preparing the document, the date prepared, and the batch/box/sequence number for each document.

(4) Magnetic tape to generate fiche headers: This tape will contain all information contained in the header of the grid sheets, described above. The tape will be 9 track, ASCII, 1600 bpi, unlabeled, and will contain records sorted in batch/box/sequence order.

(5) Printout of documents sent to REMAC: This report will be generated from the Source Document Filming Log and will contain PN/PD Number, Title, and batch/box/sequence number for each document sent to REMAC. It will be sorted by batch/box/sequence number.

e. Implementation Schedule.

Develop initial source document filming and document preparation procedures	complete
Definition and design of MINISIS Files related to Source Document filming	12/1-12/31/81
Debugging of MINISIS Files	1/1/82-1/31/82

G. DIHF Target Audiences Identification.

1. Definition/Purpose. Developing nations are an important target of the transfer of technological information. It is essential, however, to reach the designers, implementors, and evaluators of development projects as well as sponsors of development activities in other developed countries. Information available on technological development is expanding rapidly, and while A.I.D. plays a major role in generating research and project data, other organizations also produce materials relevant to the development field. The need for broad and effective dissemination is enhanced by both the growing wealth of information and a wider audience.

In addition to organizations in lesser developed countries, A.I.D. staff, both in Washington and in A.I.D. missions, are priority recipients of DIHF information and materials. The expanded audience of current and potential users includes:

- a. Peace Corps;
- b. Land Grant Universities;
- c. U.S. Government Agencies;
- d. U.S. Universities;
- e. Foreign Universities;
- f. Developed Country Organizations;
- g. ICA (formerly USIA) = International Communications Agency);
- h. Private Voluntary Organizations;
- i. U.S. Private Industry;
- j. Laboratories;
- k. Hospitals;
- l. International Organizations;
- m. Research Institutes; and
- n. Professional Associations.

The purpose of this aspect of the system will be to provide A.I.D. with systematic control over the lists of organizations and individuals with whom it interacts; who are providers and users of

A.I.D. information; and who are knowledgeable resources possessing value to A.I.D.

2. Current Status.

a. Description of Current Procedures for Update of ADDS Data Base. The central resource used in providing control over AID/DIU dissemination activities is ADDS, the A.I.D. Document Distribution System. ADDS consists of a machine processable data base containing between 6,000 and 7,000 names of organizations and individuals. Each is assigned a category code, based upon an interest profile, and is placed on the list only by approval of DIU management. This mailing list is used to create complete listings, or selected subsets based upon specialty interest, for use in preparing DIU materials (such as ARDA) for distribution.

Even though ADDS was designed to be the A.I.D. Document Distribution System, it does not function as such. Its current function is limited to acting as a mailing list for the ARDA publication listing recipients by institution only. Its function may expand, especially in the area of SDI, but it will probably never function as a document distribution system for all documents within the Agency. In view of the fact that merging the Research Resources mailing list with ADDS is currently being considered, initial steps to provide more comprehensive knowledge of DIU user groups are possible through MINISIS capabilities.

Maintenance of ADDS is currently provided by LTS as part of its contract. The maintenance function will become the responsibility of DIHF as of January 1, 1982.

Two types of transactions are presently handled. The first type is adding new addresses to ADDS. Requests to be added to the list are provided by Phyllis Levine of A.I.D./DIU following A.I.D. approval. The information is in the form of "ARDA Questionnaires" (copy attached) which are sent to A.I.D./DIU from U.S. and LDC institutions interested in receiving ARDA. A.I.D./DIU assigns the 8-digit "basic recipient code" as well as the "listID" code. The "basic recipient code" forms the root of the full 13-digit recipient code which is the main record identifier on ADDS (the extra 5-digit sequence number is generated automatically at data entry time). The "listID" code indicates the type of recipient and whether that recipient is entitled to a free copy of ARDA. Approximately five to ten forms per week are received. These forms are entered on-line to A.I.D.'s IBM 370 computer using a TSO CLIST procedure written by Lee White of A.I.D./DIU. After proofing the printout of transactions entered, corrections are made via TSO EDIT commands. The proofed and edited transaction file, which is in Inquire Standard Input format, is then loaded onto ADDS in a batch run.

The second type of transaction involves changes to existing records on ADDS. These changes include deletions, changes in address, changes in recipient or listed codes, and duplication of existing records on the file. (This duplication of records is the method by which more than one copy is sent to a single address.) Changes are forwarded for processing by Phyllis Levine or by Lee White. The changes are in the form of envelopes returned as undeliverable (deletes), change of address notices, or handwritten

notes from either Phyllis Levine or Lee White describing some change or addition to be made. Damon Koach of LTS makes these changes directly to the data base using standard Inquire.

b. Research Resources. The Research Resources Mailing List, which lists individuals, offers further opportunity to provide better coordination of A.I.D. distribution and materials utilization analysis. Whereas the compilation and distribution of Research Reports is provided by Creative Associates, Inc., their mailing list is maintained at a service bureau. By adding a segment to the DIHF Target Audience Data Base, DIHF could offer "service bureau" type services to Creative Associates, while simultaneously integrating lists and utilizing pattern reporting.

3. Proposed Approach. By using the special features of MINISIS, our approach will be to extract specific data elements from ADDS in order to create an annotated file on the MINISIS system. This will allow us to provide mail list maintenance and processing currently being provided by LTS under its IQC.

Further refinements of the procedure will follow and consist of:

a. Linking subsets of the file to the documents and projects file to provide a knowledgeable institutions trace. Organizations or individuals with special skills or geographic knowledge could be cited when a search is conducted by project/subject/area;

b. Purging of system to eliminate overlap or entries that no longer need to be maintained (as specified in the contract and required annually by OMB);

c. Developing a capacity to group distribution to overseas centers with multiple recipients;

d. Introducing improved system and procedures to eliminate the practice of generating multiple labels where more than one copy goes to a recipient institution/individual;

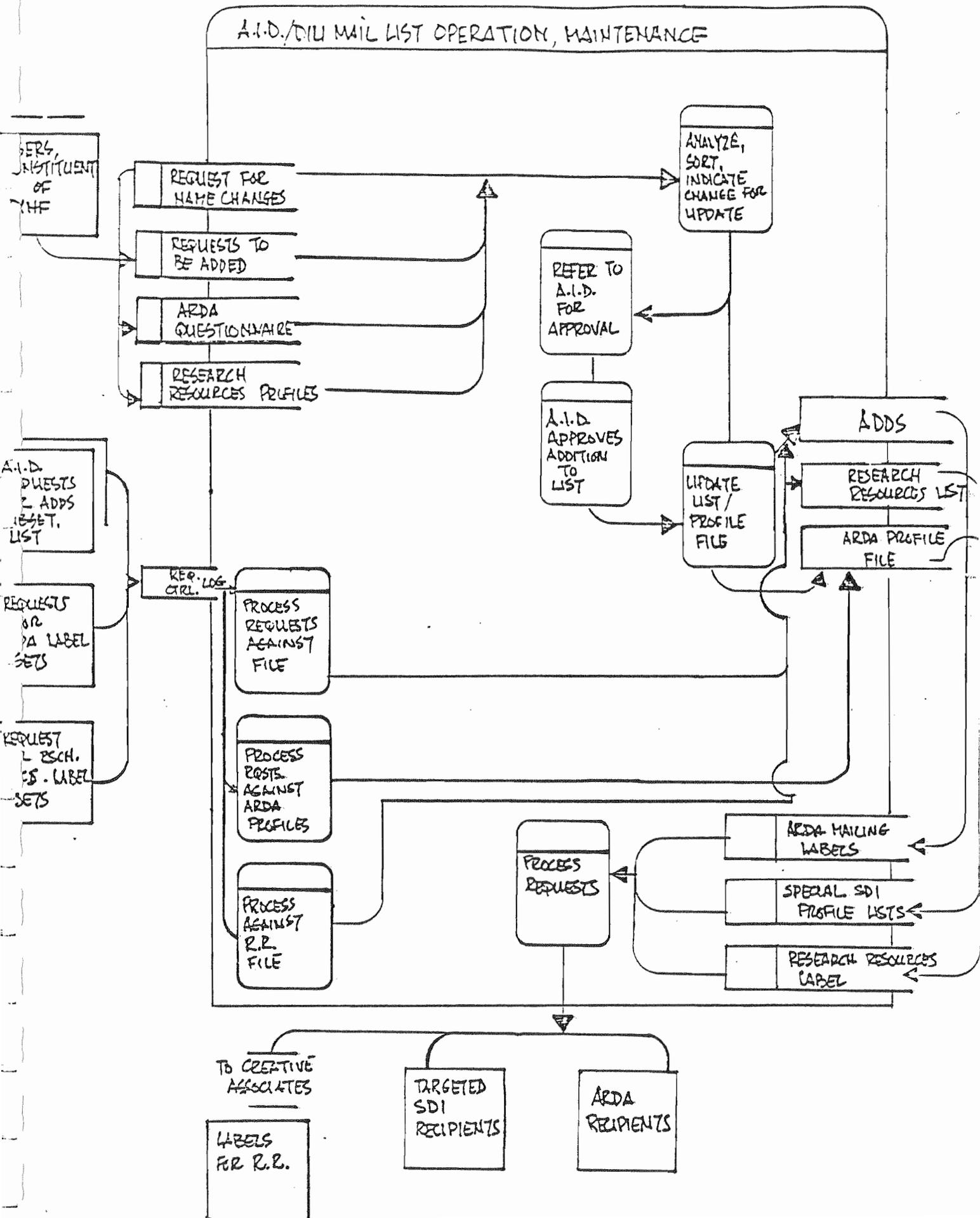
e. Conducting a formalized user survey to update user profiles (from ARDA Questionnaire) and to integrate this information into a more active SDI system; this capability, when linked with the planned capacity to generate special bibliographies, fact sheets, directories or resource lists from the data base, will add a dimension to user services that can enhance DIU's ability to issue information in a more targeted and responsive mode;

f. Adding the Research Resources mailing list and providing service bureau assistance to Creative Associates. This integration of codes, names, and addresses will make DIU's efforts more efficient and will offer opportunities to provide better management tracking and reporting.

4. Data Base Support Requirements. Exhibit II-15 graphically depicts how the various target audiences will be supported by ADDS and by subsequent enhancements to the system. The recipient code is a rather complex code made up of nine overlapping subfields. It is designed to help in address label sorting. It has two main divisions: the 8-digit RC-BASIC and 5-digit sequence number (RC-SEQ). The first digit of RC-BASIC is the traffic code.

Traffic codes are:

- a. 2 other A.I.D./W;
- b. 3 domestic address;
- c. 5 foreign recipient (non-A.I.D.);
- d. 6 A.I.D. Africa bureau and missions;



- e. 7 A.I.D. LA bureau and missions;
- f. 8 A.I.D. Asia bureau and missions; and
- g. 9 A.I.D. NE bureau and missions.

If traffic code is 3, RC-BASIC consists of: "3" traffic code, 2-digit state code, 5-digit zipcode.

If traffic code is 5, RC-BASIC consists of: Traffic code, 3-digit A.I.D. geo-code, 4-digit international city code.

For traffic codes 2 and 6-9 (A.I.D.), RC-BASIC is structured the same as a domestic address. However, since most all A.I.D. mail is routed through A.I.D./W, RC-BASIC remains the same for most all A.I.D. addresses: 1120523.

RC-SEQ is a unique sequence number for all recipient codes.

ADDS addresses do not contain any personal names--only title, position, office, or institution. If a personal name is written on the questionnaire, it is omitted. Exceptions are made for individuals in large institutions with no distinguishing title.

The attached ADDS data entry procedure document provides detail data entry instructions and field descriptions. (See Appendix D.)

5. Proposed Schedule for Implementation. The continued maintenance of ADDS as it currently exists will be of priority importance. Once the DIHF HP 3000/MINISIS configuration is operational, a request to extract those data elements from the ADDS system needed to create labels will be made and a file created subsequently on MINISIS. This task will be completed by April 30, 1982.

A corollary file containing the ARDA Questionnaire data will be created at a later date; thus, SDI profiles can be generated and tagged using common thesaurus terms. This will proceed

simultaneously with the purging of the file and the survey work to update profiles. (This work will be completed in late 1982.)

Subsequent work will then involve developing projected submodels of the ADDS list and the Knowledgeable Institutions Lists, to further expand A.I.D.'s awareness of the corporate and individual expertise available to assist in development work. This aspect of the project will be on-going throughout the entire period of the contract.

Discussions with A.I.D. and Creative Associates will be scheduled in January, 1982 regarding the specific benefits/problems, with respect to DIHF serving as CA's service bureau for mailing list support. Specific system design recommendations will then follow if agreement is reached to proceed. Our initial estimate indicates that costs for terminal access plus labels/printout paper, and file conversion time, are the only items that would impact on DIHF. Full support of this operation could easily be integrated via MINISIS.

III. MINICOMPUTER/DATA BASE MANAGEMENT SYSTEM
(HP 3000/MINISIS)

A. Hardware.

1. HP 3000.

a. Description. The Hewlett Packard 3000 Series 30 system is the computer hardware for the DIHF project. Included in the hardware configuration are the Model 7925 Disc Drives, the Model 7970E Digital Magnetic Tape Drive, the Model 2649E System Maintenance Console, and the Model 2608A Dot Matrix Line Printer.

A description of the 7925 Disc Drive includes the following specifications:

DIMENSIONS

HEIGHT:	32.5 in (82.5 cm)
WIDTH:	19.65 in (50 cm)
DEPTH:	32 in (81.3 cm)
SEEK TIME	
TRACK-TO-TRACK:	5 ms max
AVERAGE RANDOM:	25 ms
MAXIMUM STROKE:	45 ms
CAPACITY	
120 Mbytes/drive	
9 data surfaces/drive	
815 data tracks/surface	
64 sectors/track	
256 bytes/sector	
ROTATION:	
Speed:	2700 rpm
Avg. rotational delay:	11.1 ms
Data transfer rate	
bits/second:	7,500,000
K-bytes/second	937.5

The specifications for the 7970E Digital Magnetic Tape Drives include:

Number of tracks:	Nine
Read/write speed:	45 ips (114 cm/s)

Density:	1 600 bits/cpi, phase encoded electronics
Data Transfer Rate:	72,000 characters per second maximum, phase encoded electronics
Reel diameter:	Up to 10 1/2 inches (26.7 cm)
Tape: Width:	0.5 inches (12.7 mm)
Thickness:	1.5 mils (0.038 mm)

General specifications for the HP 2649E System

Maintenance Console include:

GENERAL

Screen size:	127 mm (5") x 254 mm (10")
Screen capacity:	24 lines x 80 columns (1,920 characters)
Character Generation:	7x9 enhanced dot matrix; 9x15 dot character cell; non-interlaced raster scan.
Character Size:	2.46 mm (0.097") x 3.175 mm (0.125")
Character Set:	128 character Roman
Cursor:	blinking-underline (alpha-numeric), cross-hair (graphics)
Display Modes:	white on black; black on white (inverse video); half-bright, underline, blinking (opt.)
Refresh Rate:	60 Hz (50 Hz optional)
Tube Phosphorus:	P4
Implosion Protection:	bonded implosion panel
Cartridge Tape:	two mechanisms

Keyboard: Detachable. Full ASCII keyboard. 20 control/editing keys. 2645/47/48, 8 user-defined soft keys and 16 additional control/editing keys; ten-key numeric pad; cursor pad; full graphics cursor control pad 2647A, 2648A; multi-speed auto-repeat, N-key roll-over; 1.22 m (4 ft) cable.

A description of the HP 2908A Dot Matrix Line Printer contains the following specifications:

Character formation:	Dot matrix (5x7, 5x9)
Line length:	Up to 132 characters
Print speed:	Lines per minute Matrix size
	400 5x7
	320 5x9
Line feed rate: (6 or 8 lines/inch)	15 ms

Form feed rate: 14 inches/second
(6 or 8 lines/inch)
Copies: 1 to 6 (up to 0.61 mm pack thickness)
Vertical format control: 16 channel electronic

PHYSICAL

Width: 679.5 mm (26.5 inches)
Depth: 554.6 mm (21.8 inches)
Printer height: 306.0 mm (12 inches)
Stand assembly height: 736.0 mm (29 inches)
Weight: 97 kg (215 lbs.)

b. Number and Location. The hardware described in Section a., Description, is located at 7222 47th St., Chevy Chase, MD 20815. For the number and layout of the hardware refer to Exhibit III-1.

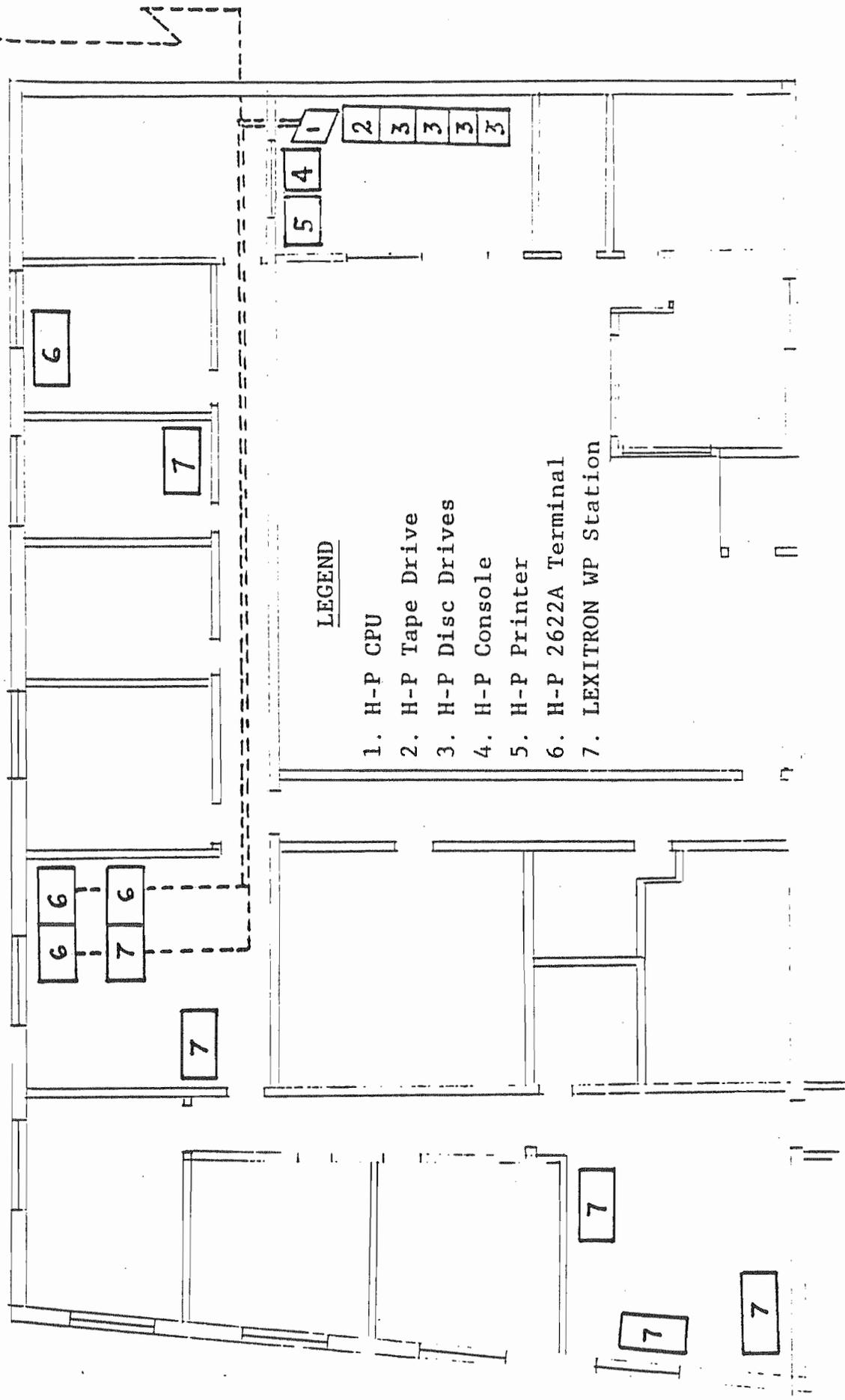
c. Capabilities. The HP 7925 disc drive is capable of fast data access while providing excellent performance and reliability in mass storage of formatted information. The 7925 drive contains a removable disc pack containing multiple platters: upper and lower protective platters and interior platters with two surfaces each, to monitor positioning of the actuator mechanism, and to format data storage.

The HP 7970E Digital Magnetic Tape Drive is a high performance, highly reliable drive, utilized by the HP 3000 system. The 7970E can yield high data transfer rates and packing density through use of ANSI-compatible 1600 bpi phase encoded data electronics. The drive can read data written on all IBM or ANSI compatible equipment.

Other advantages are direct drive, brought about by the 7970E's reel motors, and control of tape tension by photo-resistive arms. A read stack, write stack and erase head comprise

EXHIBIT III - 1

MINICOMPUTER CONFIGURATION AND LAYOUT



LEGEND

- 1. H-P CPU
- 2. H-P Tape Drive
- 3. H-P Disc Drives
- 4. H-P Console
- 5. H-P Printer
- 6. H-P 2622A Terminal
- 7. LEXITRON WP Station

the head assemblies.

The System Maintenance Console HP 2649E's modular construction, multiprogramming and multiprocessor control have given this interactive display terminal expandability. For instance, plug-in character sets accommodate speaking many languages. Dynamically allocated memory prevents spaces to the right of the last character on a line from being stored, and optional memory can expand line length. The 2649E's micro-processor controls memory, allocation, keyboard scanning and display control.

Operating in conjunction with the 2649E System Maintenance Console is the HP 2608A Dot Matrix Line Printer. It is a medium speed printer, with the advantage of being inexpensive yet reliable. The dot matrix process eliminates characters which are too light and facilitates printing multiple part forms. The HP 2608A is reliable for forms with up to 6 parts, and the 8-pin forms tractors enables reliable movement of perforated forms. A very favorable characteristic of the HP 2608A is its high throughput. It can print the upper case USASCII character set at 400 lines per minute. Little maintenance is required for this printer, which performs self tests in a self-diagnostic mode. Approximate usage level is "up to 3.12 million lines per month."

2. Terminals.

a. Description. The Hewlett Packard Model 2622A is the display terminal that will be used on the project. A general description of its key specifications includes:

Screen size: 150 mm (6 inches) x 215 mm
(8.5 inches)
Diagonal: 262 mm (10.4 inches)
Screen capacity: 24 lines x 80 columns
(1920 characters)

Keyboard: Full ASCII code keyboard with eight screen labelled keys; 128 displayable characters and an optional line drawing set, among other features.

A more specific description of the Model 2622A functions can be found below in Section c, Capabilities.

b. Number and Location. Initially, four terminals will be located at 7222 47th Street, Chevy Chase, Maryland 20815. Two other Model 2622A terminals, both with thermal printers, will be located on-site at A.I.D. at 1735 N. Lynn Street, Rosslyn, Virginia.

c. Capabilities. The HP 2622A terminal high resolution display feature offers: 7x11 dot matrix in a 9x15 character cell; display enhancements and 2 pages of display memory with or without enhancements (128 bytes of non-volatile configuration memory, battery powered). The display memory, optional line drawing set and enhancements such as inverse video, half bright, underline and blinking considerably facilitate data entry and illustrate specific paper form requirements. The Forms mode, which provides for protected and unprotected data fields, prevents entry of data from the keyboard or computer into protected fields and places such data in unprotected fields.

Screen labeled user definable function keys can incorporate several operations at once. Eight redefinable soft keys with 16 character labels can simplify entry of different forms as well as user interface. Local and remote functions

include capabilities for local copy; entry of recurring repetitions fields; cursor movement; calling a new program; selecting or branching; and logging-off, respectively.

The detached keyboard with its typical typewriter style gives easy access to the Tab and Return keys and contains a separate numeric pad.

The HP 2622A contains both character and block mode entering and editing of data and includes a modify mode, a line mode and a page mode. Insert and delete keys also facilitate editing. Other editing features are positioning of the cursor, control of the margin and tabulation and memory lock.

Two of the display terminals located at 1735 N. Lynn St., Rosslyn, VA, have Integral Thermal Printers. This high-speed printer has the copy line, page and screen capability. In addition, it offers the compressed and expanded printing modes, giving 132 characters per line and 40 characters per line, respectively. Sixty line pages can be formatted with Report Mode.

Finally, the HP 2622A can perform self tests such as a complete terminal test which does not disturb data, and a printer test.

B. Software.

1. MINISIS. MINISIS is an information management tool designed to run only on the HP 3000 family of computers. It allows the definition and creation of data bases without resorting to any computer programming, most of the work being done in an interactive mode. The system does not require a dedicated computer; it will run on a minimum Hewlett-Packard 3000 hardware and software configuration, plus HP-KSAM.

Because the system was designed to be interactive, it must be able to function in the language of the user. It is currently available in English and French only, but each site may adapt the user interactions to the language of its choice. The system may be run in more than one language on the same machine at the same time. Spanish will be actively supported in the future.

The history of the development of MINISIS includes its use in libraries. This is an application that has many requirements for which computer-structured data has not generally been amenable. Fields of data must be of variable lengths within the same record, and within the data base. Fields may repeat many times, or may not exist at all. Fields may need to be grouped together, and these groups themselves may repeat. As a consequence of these needs, MINISIS has been designed with an extremely flexible approach to structure. This is reflected not only in the original configuration, but in the fact that a data base may be easily changed even after considerable use. Many options that affect only an individual user may be specified by him/her, relieving computer staff of

the responsibility of making frequent internal changes to satisfy individual user demands.

Library applications demand that users be given rapid, easy to use access to data bases. This is provided by the QUERY processor that allows many searching operations. It is supported by a data base structure that makes such access fast and efficient. This same structure also forms the foundation for report generation processors that allow sophisticated operations to be performed on large amounts of data.

Since this is truly an interactive system, many users may simultaneously access and update the same data bases, all performing different operations. Since all users may not need access to the same data, the same information will be viewed by different people in different ways. Different data bases may be combined so that a user will see all the data as being in one place.

User access to data bases can be restricted using the security feature of MINISIS. This feature, applied by a data base manager, can limit a user's access to both data and processors.

The MINISIS system has been written specifically for the HP 3000 family of computers, under the Multi-Programming Executive (MPE). The programs are written in HP's System Programming Language (SPL), a high level language allowing access to the powerful operating system, and a sophisticated structured approach, at the same time.

2. COBOL. COBOL II/3000 is the primary commercial programming language for the HP 3000 computer system. COBOL II is implemented

at the highest level for 9 of 12 functional processing modules of the 1974 ANSI Standard for COBOL.

In addition, COBOL II has extended capabilities beyond the ANSI74 requirements. As a subsystem on the HP 3000, COBOL II interfaces with the data communication and data base management subsystems, as well as the MPE file system itself. These extensions reduce programming effort and application development time by providing a complete and comprehensive set of on-line application development tools for the COBOL programmer.

a. COBOL II Modules. COBOL II/3000 conforms to the Level-2 implementation (except the RERUN option for I/O) of nine of the twelve modules defined by the ANSI COBOL X3.23-1974 specifications. COBOL II/3000 is a set of functional processing modules that have the following capabilities:

(1) Nucleus Module. This module defines structures for elementary internal processing of data within the basic structure of the four divisions of a COBOL program.

(2) Table Handling Module. This module provides the capability for defining and accessing items in up to three dimensional, variable-length tables.

(3) Sequential I/O Module. This module provides the capability for defining and accessing sequentially organized files.

(4) Relative I/O Module. This module provides the capability for defining and accessing files in which records are identified by relative record number.

(5) Indexed I/O Module. This module provides the capa-

by key values as well as sequentially and randomly within the same COBOL program.

(6) SORT-MERGE Module. This module provides sorting and merging capabilities of single and multiple input files. ASCII and EBCDIC data types and user defined collating sequences are implemented to allow the tailoring of the SORT-MERGE capability to specific data and sequence requirements of the particular application.

(7) Segmentation Module. This module allows for specification of the segmentation of the COBOL program.

(8) Library Module. This module reduces redundant code within multiple programs by allowing the programmer to place frequently accessed code into one or more library files which are incorporated into the program during compilation.

(9) Inter-Program Communication Module. This module allows COBOL to transfer control to one or more programs which may be written in COBOL (either COBOL/3000 or COBOL II/3000), SPL or FORTRAN and whose names may or may not be known at compile time.

b. Language Extensions. In addition to meeting the Level-Two ANSI Standard for nine functional processing modules, Hewlett-Packard has implemented several extensions to the Standard in order to increase the capability and efficiency of COBOL II/3000. The most significant extensions are:

(1) Microcoded Instructions. Frequently utilized COBOL instructions are coded into system firmware to improve the RUN-TIME efficiency of application programs.

- (a) The microcoded PERFORM statement decreases the overhead for transferring control to other sections of code within structured programs.
- (b) The EDIT instruction which produces formatted output is microcoded to increase the efficiency in producing output reports.

(2) Pre-Processor Function. This function provides statements which allow the programmer to equate a particular section of code (\$DEFINE) or a file (\$INCLUDE) to an identifier. This identifier can be referenced throughout the program and at compilation is replaced with the expanded code or program file which it represents.

(3) Program Debugging Aids. These aids allow for the increased efficiency of the COBOL programming staff by providing tools which aid in finding problems within a program during the development cycle.

- (a) CROSSREF provides a listing of all symbols and labels and their locations within the source code.
- (b) VERBMAP provides a listing of all COBOL II statements and their location within the object code.
- (c) DEBUG allows for a programmer to interactively trace through the execution of a program in order to determine logic errors.

(4) Access to Subprograms. COBOL II provides the capability to call subprograms written in COBOL, COBOL II, FORTRAN

and SPL. This allows for the usage of preexisting code which performs a desired function.

(5) Access to MPE SYSTEM INTRINSICS. This allows easy programmatic access to the full power of the MPE operating system through direct access to the System Intrinsic. In addition, it:

(a) Allows for passing byte and word address parameters and usage of decimal or octal literals.

(b) Allows checking of Condition Codes indicating the result of calling the Intrinsic.

(6) ACCEPT FREE option. This option allows a free format for low-volume data entry.

(7) File Locking Capability. This capability permits a program to request exclusive access to an MPE or KSAM file through the usage of the EXCLUSIVE and UN-EXCLUSIVE statements.

(8) Special Registers. TALLY, CURRENT-DATE, TIME-OF-DAY, and WHEN-COMPILED are registers frequently used programmatically and provided by COBOL II to reduce programming effort by eliminating the need to construct and access these registers within the WORKING SECTION of the program.

(9) Packed Decimal (COMP-3). This allows for efficient storage of data on the stack during execution.

(10) Multiple Entry Points to Subprograms. This reduces code redundancy by allowing similar functions within portions of code which are identical to be coded into a single subprogram and be accessed through multiple entry points.

c. Hardware Environment. The minimum hardware system required to implement COBOL II/3000 is an HP 3000 Series II, III, 30, 33 or 44 with 256Kb of memory and the COBOL II firmware.

d. Software Environment. COBOL II/3000 requires the current version of the MPE operating system.

3. Word Processing Utilities. To replace the WANG VS System used by LTS for data entry, abstract processing and access to A.I.D./ODM equipment, a word processing package from HP is proposed for DIHF use. This will enable many off-line activities to be performed without jeopardizing the direct access functions of MINISIS or diminishing its search response capability. Word processing will be used to create the data base records using formatted screen capability and for performing off-line edits during review and correction cycles prior to data base loading.

a. HPWORD. HPWORD is an easy to use word processing system, which responds to the user on a keystroke by keystroke level and uses menus to prompt the user through many word processing functions. The user, therefore, does not have to remember numerous editing commands, but can initiate these functions with the touch of a key and HPWORD responds quickly.

Documents shown on the HPWORD display screen are presented as they will be printed out, including bold and italic typefaces and single, double and triple line spacing.

A major benefit of HPWORD is that it can operate on all members of the software compatible family of HP 3000 computer systems in conjunction with all other business applications.

HPWORD can operate simultaneously with data processing activities. The multifunction capability of the HP 2626W allows it to be a dedicated word processing station when HPWORD is running and a high performance HP 2626A Display Station in data processing mode. This includes the capability of defining and inputting data for business graphics and charts and IBM 3270 emulation based on HP 3000 communications software. In addition, the same communications networks linking HP 3000's together and with other computer systems can be used to transfer documents between users.

Security levels are the same as those for the MPE operating system. MPE offers three levels of log-on security at the account, group, and user levels. Document lockword security is also available.

(1) Hardware Environment.

HP 3000 Systems

Series II	Series 40
Series 30	Series 44
Series 33	Series 64
Series III	

(a) Terminals. The HP 2626W Word Processing Station is required for HPWORD and was designed for secretarial use. The keyboard is detachable, and the typewriter-style layout makes the transition from typewriter to HPWORD very easy.

The keyboard has syntactic keys (character, word, line, phrase, sentence and paragraph) for cursor positioning and editing functions such as insert, delete, move and copy. The keyboard also contains specially labeled keys for common word processing functions such as insert, mark and center.

(b) Supported Printers.

HP 2601A	HP 2619A
HP 2608A/B	HP 2631B
HP2 613A	HP 2680A
HP2 617A	

(2) Software Environment. HPWORD requires the MPE IV operating system.

b. TDP/3000. Text and Document Processor/3000 (TDP/3000) is a text editing and document formatting system. Easy-to-understand Commands facilitate typing of documents; correcting of errors; rearranging of text; text formatting; and generating of final reports. TDP/3000 can also create letters, memos, manuals, tabular reports, and computer programs. Standard HP terminals can be used, without special interfaces or options.

(1) Features.

- (a) Text editing;
- (b) Document formatting;
- (c) Mathematical expression handling;
- (d) Table creation;
- (e) Built-in calculator;
- (f) Command files;
- (g) Form letters;
- (h) Automatic hyphenation;
- (i) Security; and
- (j) MPE command execution.

(2) Text editing. Changes to a file can be done with TDP/3000. Words, phrases, sentences, or paragraphs can be inserted, deleted, modified, or replaced, across the entire document or any portion of it.

Documents can be rearranged by moving or copying text from one part of the document to another. Other documents may be merged into the text file either while editing or just prior to printing.

TDP/3000's editing capabilities are also complemented by the text editing features of HP terminals. (Note: Terminal text editing features require an HP block mode terminal and are not available on the character mode HP 2621A/P, and HP 2635A/B terminals.) The TDP/3000 command, SCREEN, will display a requested section of a document on the terminal. Full screen editing using the terminal's text preparation capabilities can be performed. Once all changes have been inserted, the SCREEN command is executed by pressing the ENTER key.

(3) Document Formatting. Using embedded commands, TDP/3000 offers print enhancement features such as underlining, subscripts, and superscripts, and user control over margin and tab settings.

The COLUMN command will allow all or a part of a report to appear with multiple columns. Output page size can be modified or the automatic pagination feature can be used.

Titles can be centered or right or left justified. Multiple line headings and footings can be inserted and changed for every page. Footnotes can be inserted after the line containing the reference. TDP/3000 is capable of placing the footnote on the correct page.

A table of contents can be created by TDP/3000 by specifying the sections to be included. As the document is printed, the page numbers of the specified sections are kept. At the end of the document, the table of contents, with the page numbers inserted, is printed.

(4) Mathematical and Scientific Expressions. TDP/3000 handles formatting and editing of mathematical expressions, including superscripts, subscripts, and fractions, allowing expressions to be easily inserted or modified. Terms may be nested and can include compound fractions.

(5) Table Creation. Creation of tables and revision of columnar documents occurs in several ways. Material may be formatted into columns during typing by user-set tabs or can be formatted into columns after typing using the ALIGN command. The material also can remain in the file as unformatted text and be formatted into columns at the time the document is printed. All three options can produce the same report.

(6) Built-in Calculator. TDP/3000's calculator can add, subtract, multiply, divide, and take square roots. Parentheses may be used to group terms. Results can be saved and used in the next computation.

The calculator can do sums and other calculations involving rows and columns that are part of a document using the TOTAL command. The results can be inserted into the document.

(7) Command Files. With the USE command, TDP/3000 provides a means of simplifying repetitive tasks. A set of frequently used commands can be entered, stored in a "usefile," and executed with a single USE command. The usefile eliminates tedious input of multiple commands for creating standard documents.

(8) Form Letters. Form letters can be created and stored with the changing information designated by specially defined variables called "macros." When the form letter is to be

used, TDP/3000 can prompt the user for the needed information, and prepare it for final review and printing.

(9) Automatic Hyphenation. Automatic hyphenation can be used on all or part of a document. The user may request to see the results of each hyphenation and has the option of overriding the automatic hyphen. An exception dictionary is kept by TDP/3000 for words which do not follow standard hyphenation rules.

(10) Security. For sensitive or company-private documents, a file can be encrypted before it is stored. The user supplies a code word that is used to scramble the contents of the file. The document is stored in this unreadable form. It is deciphered when it is retrieved with the code word. This level of security provides additional security to that provided by the MPE operating system.

(11) MPE Command Execution. You can execute certain MPE commands such as LISTF, PURGE, STREAM, RUN, SAVE, SHOWJOB, and COBOL without exiting TDP/3000.

This feature is particularly useful when writing computer programs. A user can compile TDP-created programs, receive compiler messages and be ready to make corrections without leaving the TDP/3000 system.

C. Data Base Definition.

1. Proposed File Layout. The DIHF will support a variety of data bases currently operated by AID/DIU. These include:

- o RANDD (Research and Development)
- o DIS, which consists of:
 - BREF (Bibliographic Reference)
 - TEXT (contains Abstracts of Design Documents)
- o ADDS (A.I.D. Document Distribution System - used primarily as ARDA mailing list).

In conceiving DIHF, and to take advantage of MINISIS's capabilities, a revised approach to information processing is proposed. As presented in Section I, the ultimate structure of DIHF will resemble Exhibit I-8 which depicts the relational aspects of the data bases. Since, however, we need to deal with extant files, the following discussion is provided.

a. File Names.

- (1) PROJECT FILE (BASIC PROJECT DATA) cf. below;
- (2) DOCUMENT FILE (including project documentation, non-project documentation, and non-A.I.D. documentation);
- (3) EXPERTISE FILE (including A.I.D. Contractors ["32's" and "35's"], possibly expanded in the future to include a roster of potential experts, a la Taiwan; ADDS; and other DIHF Users); and
- (4) LOGFRAME FILE (including logframe elements necessary to confirm a given project's development hypothesis).

b. Unified Information System. The RFP asks for a unified information system which avoids the confusion of the current TEXT/BREF/RANDD/ADDS system. The first two sections of the above

working draft offer a coherent and unified structure for a revised A.I.D. system. The unity of the data base cannot consist in simply reducing the number of files; any rearrangement of the files must be based on sound structural and ordering principles without which such rearrangement would only be a lumping together of disparate items. The operative ordering principles of this structure are two:

(1) Common Authority Files (Subject and Non-Subject).

Hereby is eliminated one of the basic sources of confusion in the present A.I.D. system, especially the current use of two non-coordinated thesauri.

(2) Clearly Differentiated Information Files. The

current A.I.D. system contains the anomaly of confusing the project data base (TEXT) with the project document data base (BREF). The confusion consists principally in the fact that abstracts of project designs are placed in TEXT while the BREF record for the document on which the abstract was based has the abstract field vacant. An important and negative result of this confusion is that information that strictly describes a project is entered as if it characterized a document, e.g., Purpose, Technical, and Special Concern Codes and especially descriptors ("keywords"). At the same time, the TEXT record of the project is left incomplete in several important respects.

One way of removing this anomaly would be to restate the difference between TEXT and BREF on a new basis, namely, the distinction between projects and documents. This distinction would permit a clear differentiation and allocation of general project

information from project document information. According to this approach, a PROJECT FILE, consisting of a PBAR line entry expanded to include additional important line items would be created for basic project information. The following is a proposed format for such a BASIC PROJECT DATA sheet.

PROPOSED BASIC PROJECT DATA (BPD) FOR THE PROJECT FILE

- o PROJECT9
- o DURATION
- o STATUS (Active/Inactive)
- o L/G (Loan/Grant)/Recipient
- o PROJECT COST:
 - o A.I.D. Project Funding
 - o Total Project Funding
- o Other Donors
- o PURPOSE, TECHNICAL, SPECIAL CONCERN Codes
- o Project DESCRIPTORS

It should be noted that several of these fields could be updated by the abstractor: Duration; A.I.D. Project Budget; Purpose, Technical, and Special Concern Codes; and Descriptors.

In which file the abstract of the design document should be placed remains an unresolved question. The logic of clearly separating project from document information points to taking the abstract out of the PROJECT FILE and placing it on the DOCUMENT file. In this way, abstracts would clearly and in all cases be tied to documents. Some, however, while recognizing the anomaly of the separation of abstract and document in the current TEXT/BREF system, consider the anomaly justified on the grounds that it is necessary for the user to have an abstract of the project design (together with updates) available on the PROJECT FILE, and that this necessity outweighs the importance of the conceptual clarity which distinct project and document files would provide. Given this difference of opinion, two alternatives appear available:

Draft:

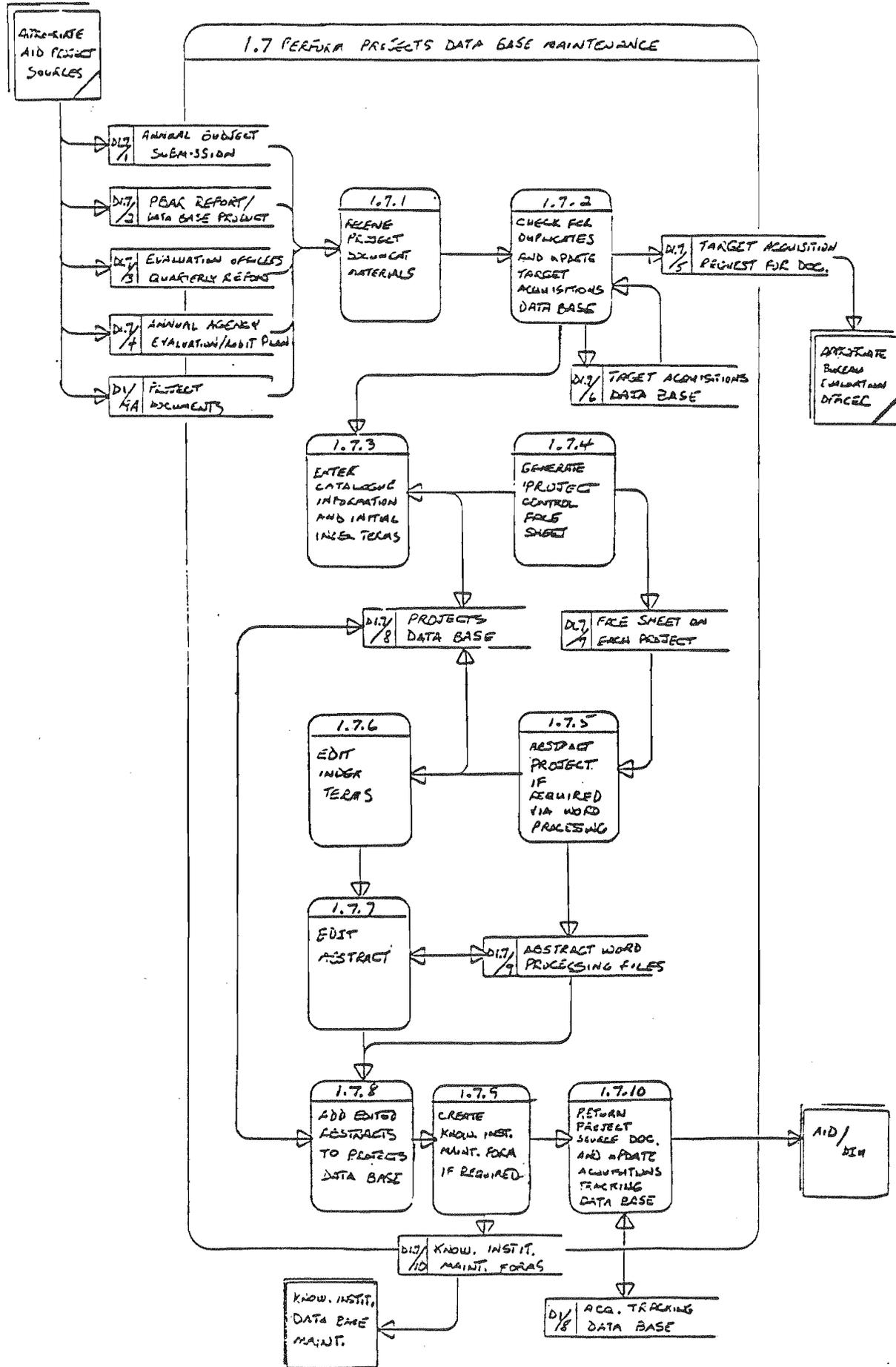
(1) let the PROJECT FILE consist of the BASIC PROJECT DATA sheet plus the Summary Project Description (with its updates) thus continuing the current anomaly of having project design documents without abstracts in the document file; or (2) let the project file consist solely of the Basic Project Sheet but program the system so that the user who keys onto the Project File can retrieve abstracts of the design documents without the intervening document cataloging information. Exhibit III-2 graphically depicts the proposed project data base maintenance plan.

Whatever choice is made between these two alternatives, it should be noted that all documents of whatever type--project and non-project, A.I.D. and non-A.I.D.--will be contained in one unified document data base. The current distinction between BREF and RANDD will therefore be eliminated. The differences between document types will be made through document descriptors (cf. INDEXING).

The proposed Expertise File poses a problem because of the co-existence of a large informational and material overlap as well as a lack of clear formal differentiating characteristics. First, the experts involved comprise institutions and individuals; second, the experts can be subdivided according to DIHF users (including ADDS) and A.I.D. contractors; third, many experts belong in both categories; fourth, there exist widely different input formats for expert institutions and for ADDS. Any help will be appreciated.

The Logframe File appears to be an essential data item to support PPC/E activities. Many of PPC/E's analyses depend on

Exhibit III-2
Projects Data Base Maintenance



comparing actual versus predicted outcomes at all levels of the project design reflected in the logframe. Consternation in the Evaluation Office over the abuse of the "development hypothesis" as reflected in poorly-constructed logframes has resulted in a proposal to expand the "levels" available to project designers who are unable to avoid "jamming" of sequential logic steps while using the output-purpose-goal hierarchy to construct their development hypotheses. As an example of how we can help PPC/E, the structure of this file would permit multiple level entry and the abstractors could combine the "Objectively Verifiable Indicators" column information with that of the "Narrative Summary" column to produce a clear picture of project design and expectation.

D. Data Base Conversion.

1. Discussion of Problems. Of the INQUIRE data bases maintained on the A.I.D. computer, four are to be converted to MINISIS for use in the DIHF. These four data bases are:

TEXT - a data base of project information, primarily but not solely of a textual nature;

BREF - a data base of bibliographic information, principally on A.I.D. project documents, but also including data on knowledgeable institutions;

RANDD - a data base of bibliographic information on A.I.D. sponsored technical reports; and

ADDS - a data base of names, addresses, and interest profiles of recipients of ARDA, the A.I.D. Research and Development Abstracts.

These data bases suffer from a number of problems, principally for historical reasons. One problem is that there are two bibliographic data bases, and this situation is directly attributable to the past history of A.I.D. Some duplication of documents exists between BREF and RANDD; such duplicates need to be identified and replaced by a single entry or eliminated; and it is unclear whether this is a task that lends itself readily to automation. Some data elements currently carried on BREF rightfully belong on TEXT, and vice versa. Changes in abstracting guidelines are reflected in abstracts written at different times. Different approaches are used to convey various types of information. Abstracts entered prior to a certain date are entirely in upper case; those entered later are in mixed upper and lower case. No foolproof algorithm exists for converting upper case text to mixed upper and lower

case. These examples are typical of a situation in which both an organization and its use of information are growing.

2. Proposed Approach. As the Discussion of Problems which precedes this section illustrates, conversion and subsequent purification of the data base involves more than simply computer programming. A considerable amount of intellectual effort is unavoidable. As a result of these factors, it seems reasonable to divide the conversion task into two components: the mechanical transfer of data from INQUIRE to MINISIS, and the purification of the data once it has been transferred.

There are two MINISIS processors which will accept bulk data from the outside world through a batch process. These are the ISOCONV processor, which will dump tapes prepared in ISO-2709 format into a MINISIS data base, and the BATCHIN processor, which will enter data from a textual data base in a specific format into a MINISIS data base. In our original proposal, we proposed to transfer the data from INQUIRE to MINISIS by means of custom COBOL programs written to run with the INQUIRE Programming Language Interface (PLI). These programs would extract the data from the present data bases and format it onto tape in the proper format for use by the ISOCONV processor. An alternative approach is to develop INQUIRE queries against the data bases which would generate output in a format suitable for the BATCHIN processor. This output would be captured on tape files for transfer to the HP 3000. This approach emerged after gaining greater knowledge of MINISIS and its capabilities. It should be more effective because the BATCHIN input format is considerably simpler than the ISO-2709 format. The latter

involves the creation of directory information within each output record and is therefore essentially a two-pass operation. INQUIRE queries are also simpler and faster to write than COBOL programs, particularly COBOL programs which interface with the INQUIRE PLI. This advantage is considerably enhanced when existing INQUIRE reports can serve as the basis for the conversion queries, i.e., the existing INQUIRE reports can be "cannibalized" via the TSO Editor to produce the necessary conversion queries, thus reducing the effort required even further.

Given that the currently proposed MINISIS data base design deviates from a direct mapping of the current data bases, and that a number of problems are associated with the data to be converted, further advantages can be realized by a two-step conversion. In this two-step approach the data would first be extracted and transferred to a set of four MINISIS Relation Definitions (RDs) which exactly map the present INQUIRE data bases. For this the QUERY/BATCHIN approach outlined in the previous paragraph would be used. ISOCONV will unload selected data from the temporary data bases and transfer it to the final data bases, using suitable Correspondence Definitions to do the necessary reorganization and allowing MINISIS to handle the complexities of the ISO-2709 format. Although this approach involves effectively two conversions, its advantages are many: the physical transfer of data from one computer and DBMS to another is separated from the conversion of the data from one organization to another; MINISIS and HP 3000 operational shakedown can be accomplished in an environment which allows direct comparison of results during parallel operation; the intellectual

operations involved in reviewing and purifying the data can be carried out in an environment in which several of the DIHF staff are already trained and competent; that this environment is under DIHF control rather than the control of others, and, that it allows greater flexibility in assigning priorities to the various tasks involved in purifying the data base.

3. Schedule of Conversion. Tasks needed to accomplish the data base conversion are as follows:

- a. transfer MINISIS software from ITI to A.I.D. DIHF, by week of 21 December, 1981. (Accomplished).
- b. develop MINISIS data definitions for "shadow" A.I.D. data bases, completion by 11 January, 1982.
- c. develop INQUIRE queries for transfer of data to A.I.D. DIHF, completion by 25 January, 1982.
- d. transfer INQUIRE data to A.I.D. DIHF, completion by week of 1 February, 1982.
- e. develop MINISIS data definitions for final A.I.D. data bases, completion by 25 January, 1982.
- f. load final A.I.D. data bases: according to priorities to be established by A.I.D.

4. Test and Acceptance Plan. Testing of the "shadow" data bases will be maintained in parallel with the INQUIRE data bases once they are established, for a period long enough to insure that the MINISIS system is operating correctly. Following transfer of the data from the "shadow" data bases to the final data bases, and after the highest priority purification has taken place, operation with the final

data bases will begin, and parallel operation of the "shadow"
data bases will be tapered off.

IV. DIHF PRODUCTS AND SERVICES

A. Micropublishing.

1. Purpose. The purpose of the micropublishing service is to respond to on-demand and standing requests for microfiche copies of documents contained in the RANDD, TEXT, and BREF data bases. Duplicates will be made from the collection of 2nd generation silver-halide fiche housed at the DIHF, and will be sent to AID personnel, AID contractors, and other interested parties. The 2nd generation fiche collection, the machinery used to make the diazo duplicate fiche, and an area for the initial processing of requests will be in one room. Having these three elements of the micropublishing request fulfillment activity within the same work space will enable the DIHF to respond in a timely manner to requests for microfiche duplicates.

2. Current Status. A physical inventory has been completed of the 2nd generation PN series fiche collection. DIHF staff have identified all fiche missing from this collection and are preparing a report that will list them. As we receive the full collection of 1st generation masters, we will be able to produce 2nd generation silver-halide fiche from the masters. If masters are not found, the document will need to be refilmed.

We have also received a substantial portion of 2nd generation fiche from the PD series. A physical inventory of this collection is on hold pending receipt of a RANDD printout or other listing of the documents represented in this series, since we have basis on which to make a determination.

The existing collection of 3rd generation diazo duplicate fiche has also been inventoried. The comprehensiveness of this collection depends, of course, on the comprehensiveness of prior generations. This collection will be filled in as the availability of time on our fiche duplicator and availability of 2nd generation silver halide duplicates permits.

Problems include unacceptable density and/or resolution, uneven exposure of the film, obliteration of data because of dirt in camera, warped fiche, registration of images on the fiche out of specification, and various problems with the information in the header. DIHF will be maintaining a continually updated report that lists unacceptable fiche. The initial listing of bad fiche is currently being compiled using documentation provided by SMA, Costabile Associates, and DIHF staff identification of bad fiche as they have been run across through routine request fulfillment.

DIHF staff have already destroyed a large batch of 4th generation diazo duplicates that were apparently made by SMA from 3rd generation diazo duplicates with striped (opaque) headers; thus these 4th generation duplicates had nearly opaque headers and needed to be held up to light to discern the characters in the header.

For those 1st or 2nd generation fiche with resolution, density, or other problems which render the information unreadable, DIHF recommends re-filming. For those fiche with problems in the header (e.g., title chopped off, no title, etc.), again, re-filming is the only feasible solution. This would seem to be a lower priority.

The Bruning OP-59 microfiche duplicator is currently operational and an experienced operator for this machine has joined the DIHF staff. Equipment for quality-control related measurements of microfiche density and resolution have been procured.

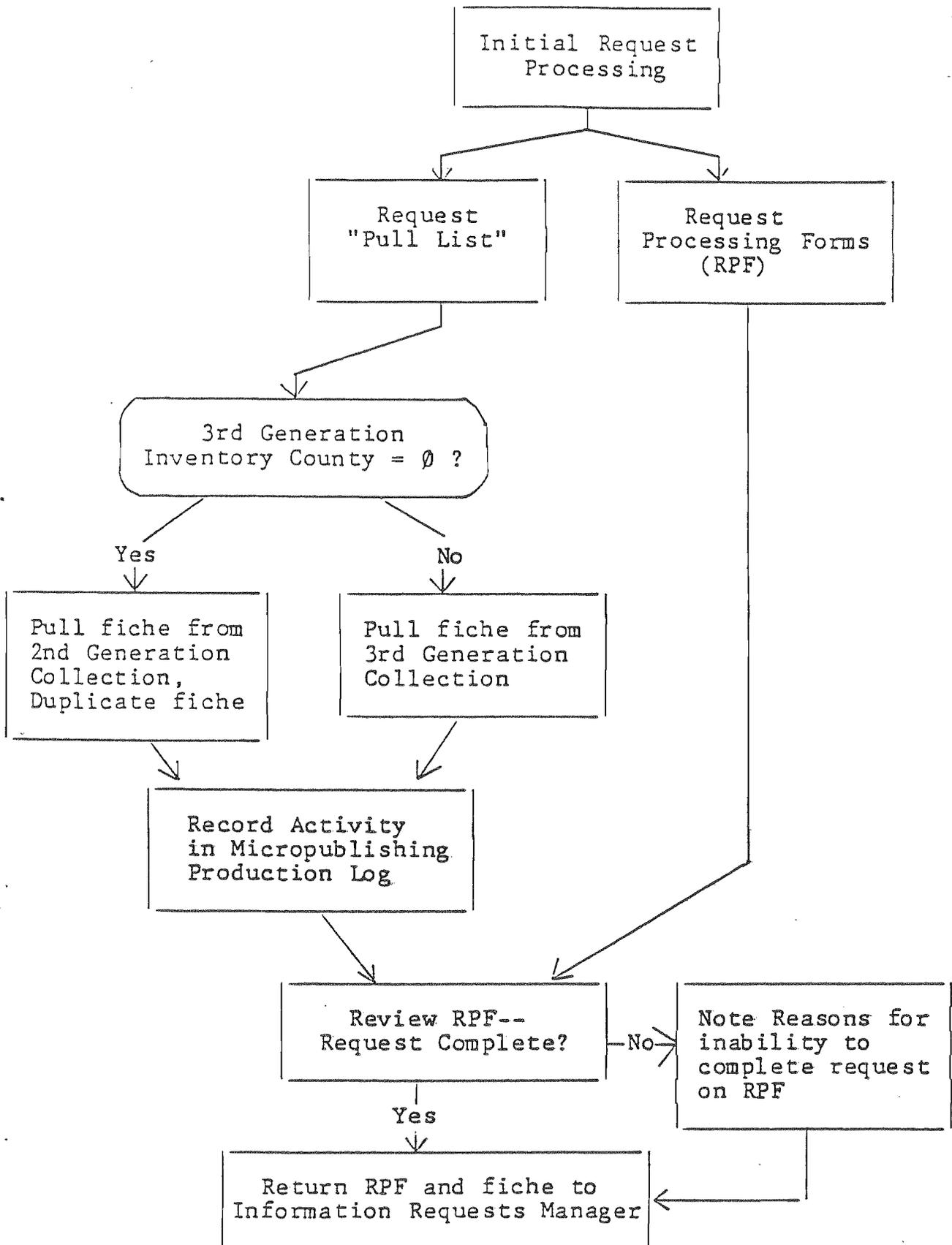
Routine density and resolution tests will be performed on all fiche duplicates made at the DIHF. Values obtained from these measurements will be entered in the Micropublishing Production Log, described below.

As A.I.D. is aware, the quality of the existing microfiche collection is highly variable within all three generations.

3. Proposed Approach. Requests for microfiche duplicates will be received, logged in, and separated from other requests as described in Section IV-D (User Request Fulfillment) of this report. After this initial processing, a Request Processing Form, or RPF (see Exhibits IV-6 and IV-7 of Section IV-D) for each individual request will be put in the fiche duplicate "in" box along with a Request "Pull List" for that day's activity. The Request "Pull List" will contain the PN/PD Number, Request Number, Due Date, and 3rd generation inventory count for each fiche duplication request. The "Pull List" will be sorted by Due Date, and within Due Date by PN/PD Number, thus providing the micrographics technician with a prioritized list of the fiche duplicates needed, sorted in an order that corresponds to that of the fiche collection. The RPF provides all the information necessary to determine whether a particular request has been completed.

Exhibit IV-1 details the entire procedure for producing fiche duplicates in response to user requests.

Exhibit IV-1
Process for Producing Fiche Duplicates



4. Data Base Support Requirements. Three primary areas of MINISIS support for the micropublishing activities are envisioned:

- a. Inventory files for 1st, 2nd, and 3rd generation fiche collections.
 - (1) Inventory of 1st and 2nd generations used to ascertain whether microfiche duplication can be used in fulfilling request; comprehensive-ness of collection
 - (2) Inventory of 3rd generation collection used to determine whether requested fiche duplicate is already on hand. (see below)
- b. Production of the Daily Request "Pull List"
 - (1) contains prioritized (sorted in descending order of Due Date) list of microfiche duplicates needed for each day; sorted within Due Date by PN/PD Number
 - (2) automatically queries inventory file of 3rd generation fiche and displays inventory count to help in determining whether new fiche duplicates are required.

c. Micropublishing Production Log

For each request for each document, the following data elements would be recorded:

- Request No. (from RPF)
- PN or PD No.
- Title
- No. of fiche used to store document (I)

- No. of fiche duplicates (of document) requested (II)
- No. of fiche duplicates (of document) made (III)
- No. of individual fiche duplicates made (I x III)
- No. of fiche copies of document added/subtracted to inventory of 3rd generation (III less II)
- Quality notes, resolution and density values
 - for 2nd generation master
 - for 3rd generation dupe
- Operator's initials
- Date

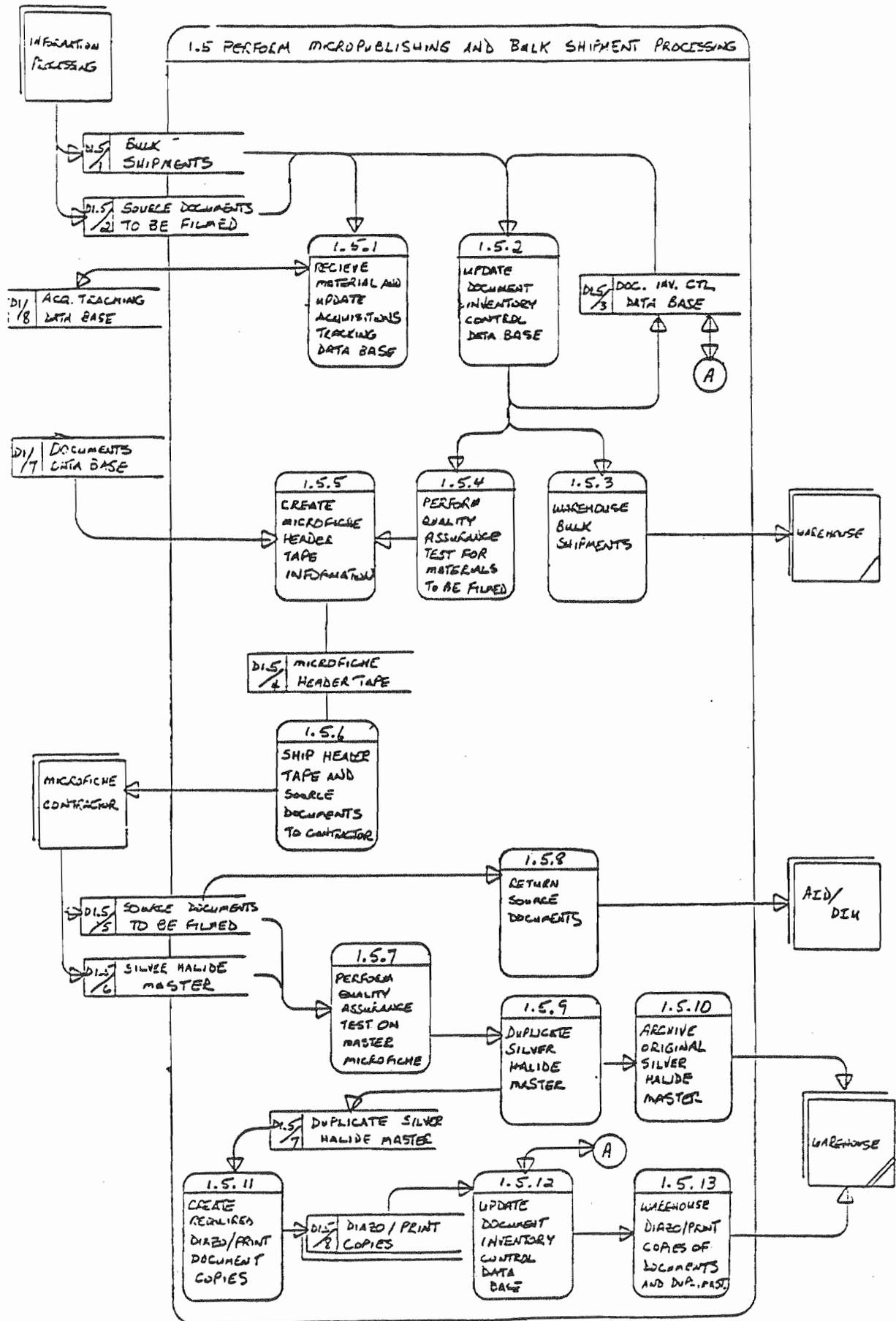
Once this information is captured on MINISIS, the following reports can be generated: reports detailing who produced any given fiche duplicate and when it was produced; and continuously updated inventory information on the three collections. See Section IV-D for reports we propose to produce on user statistics of fiche and fiche blowback requests.

5. Dissemination. All requested fiche duplicates will be mailed in envelopes specifically designed for mailing microfiche. For further details of how fiche duplicates will be disseminated see section IV-D, "User Request Fulfillment". Exhibit IV-2 graphically depicts the micropublishing and bulk shipment system.

6. Implementation Schedule:

Installation of Bruning OP-59 Microfiche duplicator and related supplies and training of staff	complete
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Micropublishing and Bulk Shipment Processing



Implementation Schedule cont'd

Definition and design of MINISIS
Files related to micropublishing
support

12/1-12/31/81

Debugging of MINISIS files

1/1/81-1/30/82

Delivery of reports detailing
missing and bad fiche

1/82.

B. Microfiche Blowbacks.

1. Definition/Purpose. The purpose of the microfiche blowback service is to respond to on-demand requests for full-size, hard copy of documents contained in the RANDD, TEXT, and BREF data bases. Blowbacks will be made from the collection of 2nd generation fiche using a Xerox 970 Microfiche Printer. With the capability to provide blowbacks as well as fiche duplicates in responding to requests, the A.I.D./DIHF can utilize its microfiche library to satisfy those requestors with microfiche reading equipment as well as those with no such equipment.

2. Current Status. As described in Section IV-A of this report, a physical inventory of the 2nd generation microfiche collection, from which blowbacks are made, has been completed, and missing or poor quality fiche are being documented. The poor quality fiche pose a significant barrier to the production of high quality blowbacks. While fiche quality is critical in the fiche duplication process, it is even more so in making blowbacks.

The Xerox 970 has been installed and is fully operational. Trained operators for the 970 have joined the DIHF staff, thus enabling the DIHF to respond to requests for hard copy documents generated from the fiche collection.

3. Proposed Approach. After initial processing, requests for microfiche blowbacks will be entered on a Request Processing Form (RPF, See Exhibits IV-6 and IV-7 of Section IV-D) and put in the fiche blowback "in" box. Also see Section IV-D for description of initial request processing. The individual requests (entered on RPF's) will be accompanied by a Daily Request "Pull List",

which will give the PN/PD Number, Request Number, number of blowbacks requested, and Due Date for each request. The pull list will be sorted by Due Date, and within Due Date by PN/PD Number, thereby providing a priority listing of requested blowback production sorted in a manner that facilitates fiche retrieval from the collection.

The individual RPF's will provide the means to check for completion of each request. This process is directly parallel to that for the micropublishing operation described in the preceding section. Refer to Exhibit IV-3 for an illustration of the complete blowback request fulfillment process.

4. Data Base Support Requirements. Two data files will be of particular use to the blowback operations:

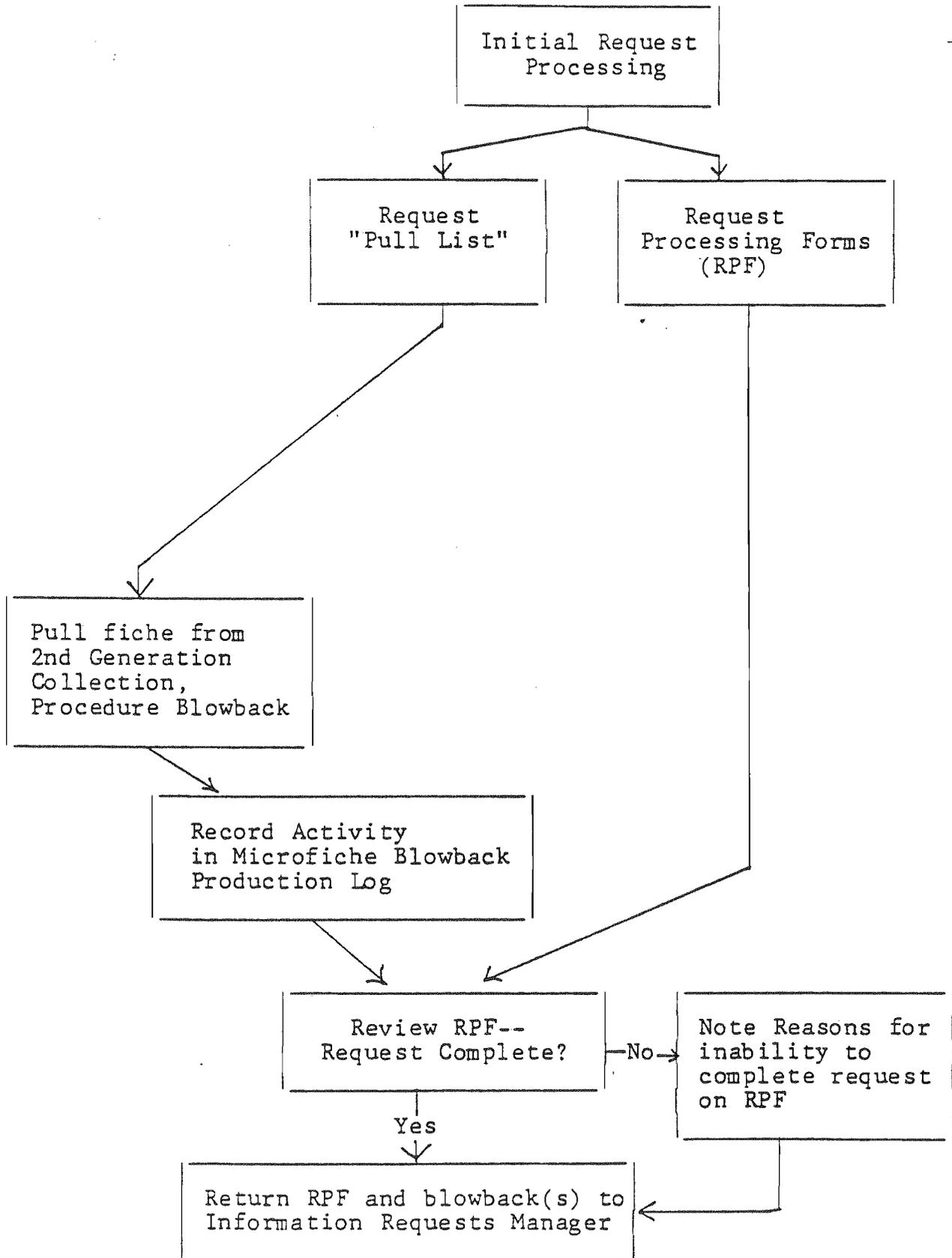
a. Daily Request "Pull List".

- (1) contains list of blowbacks requested; sorted by Due Date, and within Due Date, by PN/PD Number.
- (2) Data elements will include PN/PD Number; Due Date; Number blowbacks requested; Request Number.

b. Microfiche Blowback Production Log. For each blowback request fulfilled, the following data elements will be recorded:

- (1) Request No. (from RPF);
- (2) PN/PD No;
- (3) Title;
- (4) No. of pages for each document requested;
- (5) No. of blowback copies requested for each document;

Exhibit IV-3
Blowback Request Fulfillment Process



- (6) Quality notes, resolution and density values of 2nd generation silver duplicates used to make blowbacks;
- (7) Operator's Initials;
- (8) Date.

With the information from this log on MINISIS, reports can be produced which detail blowback production activity by day, month, or year; by PN/PD Number; or by operator.

5. Dissemination. Microfiche blowbacks will be disseminated to requestors according to the procedures outlined in Section IV-D of this report, "User Request Fulfillment."

6. Implementation Schedule.

Installation of Xerox 970 Microfiche printer and related supplies and training of staff	complete
Definition and design of MINISIS Files related to micropublishing support	12/1-12/31/81
Debugging of MINISIS files	1/1/81-1/30/82.

C. Publications.

1. Definition/Purpose. As a result of the publication function of the DIHF, information necessary to stimulate greater awareness and use of A.I.D.-funded resources will be made available. This information will be published in the form of catalogs, access journals, bibliographies, indices, directories, and accession and holding lists. In addition to their current awareness function, these documents will also have the purpose of supporting technology transfer to A.I.D. Missions, developing country institutions, PVOs, Peace Corps, and other international development practitioners.

2. Current Status. The documents generated by the publication function at the present time are described below.

a. The Catalog of Research Literature for Development (CRLD) was first published in two volumes in 1977 from materials produced by University Microfilms, Inc. It contains approximately 70 percent of A.I.D.-sponsored development reports from 1962 to 1977. The CRLD has not been updated since its initial publication.

b. A.I.D. Research and Development Abstracts (ARDA) is a quarterly awareness journal. First published in 1973, ARDA provides abstracts of A.I.D.-supported research reports and announces to its more than 6500 subscribers documents which are made available in full text paper and/or microfiche copies. Currently, R&D documents are cataloged under an IQC by Costabile; selected by DIU for publication; sent to LTS for abstracting, editing and publishing; and returned to A.I.D. for distribution. During document processing, the abstracts with header and footer information are recorded on WANG diskettes from which paper copy is produced which is sent to

a commercial typesetter to be keyed and made camera-ready. The abstracts from the diskette are also transmitted to A.I.D.'s RANDD data base. (See Section II.F.2.b.(5) on information processing for a description of ARDA document processing.)

c. Other special information products of DIU such as Directory of Development Resources, Directory of Indefinite Quantity Contracts, and Directory of Technicians on Call are either published as project outputs or as on-demand services by DIU's direct-hire staff. The latter have produced the Forestry Bibliography, DIS Response Packages, accessions lists, information analyses, and other current awareness publications.

d. Statistical and other types of reports are generated by DIU for internal office and Agency use. Contractors also file reports with DIU. For instance, LTS provides DIU with monthly reports which contain statistical and narrative information describing document processing progress. Selected from these reports is information included in DIU's report to the assistant administrator of the Science and Technology Bureau.

e. Currently, DIU provides NTIS with the hard copy of documents announced in ARDA. NTIS reprocesses these to conform to NTIS input specifications. Once processing is complete NTIS returns the hard copy documents to A.I.D.

To date, data base tapes have not been provided to NTIS or SSIE. SSIE ceased operation in October, 1981 and transferred a portion of its research in progress function to NTIS. NTIS will accept tapes of research in progress if they conform to the NTIS data base format.

To our knowledge, only CRLD and some early issues of ARDA have been published from what ultimately became the RANDD data base.

3. Proposed Approach.

a. ARDA. The publication of an issue of ARDA may serve as an example of how we will proceed in data base publishing once DIU has selected the subject matter or documents to be published. (A section on recommended improvements in ARDA will follow this discussion.)

(1) Assume the documents selected have been processed and the information necessary to publish ARDA is on the data base in a "fit-for-publication" status. The abstract, header and footnote information will be drawn off the system and a working copy of the document will be prepared for DIU's approval.

(2) This copy will include table of contents, user instructions, indices, and any document enhancements such as photographs, in addition to full text. This copy will also include suggestions for format, layout, font, letter size and spacing, columns, and other characteristics.

(3) Once this is approved, typesetting commands for font, pitch, points leading, justification, etc., will be embedded in an appropriate software subroutine and a driver tape will be created.

(4) This driver tape will then be "developed" in an output processor to produce a "proof," the camera-ready typeset copy used for printing.

(5) DIU will then receive a galley paste-up which is the last approval step before copy is sent to the printer for blue-line production.

(6) Blue-line marks the final stage of approval by DIU. Care by all parties involved in selection, processing, production, and copy preparation will preclude making changes to blue-line which is the most expensive stage at which to make changes.

(7) The publication will be printed, returned to the DIHF warehouse, and distributed to subscribers. Extra copies will be retained for subsequent requests. As necessary, the ADDS file will be updated to maintain accurate distribution lists from which mailing lists can be generated.

Publication of current awareness and other data base products will also use the data base-generated driver tape, although the production schedule will be considerably tighter than for ARDA or CRLD. Equal consideration to these other products' format and layout during the design phase will greatly facilitate subsequent processing in which automation can be used extensively. For large publications, it may be possible to develop routines that perform all photocomposition, layout, and pagination in one processing cycle, thus eliminating the paste-up phase of publication development. This economy and other production benefits--particularly flexibility in formatting--would be greatly enhanced through DIHF access to its own phototypesetter driven by the HP 3000.

b. Suggested Improvements in CRLD. CRLD is a very difficult, unnecessarily complex document to use. This results in part

from the development of the CRLD, as its classification scheme was based largely on AGRICOLA, with other terms added in an ad hoc fashion from LC subject headings or from the OECD Macrothesaurus. This created the heavy emphasis on agriculture. A program prepared by UMI sorted the data base entries but could not produce indices. Therefore, the indices were produced manually. The program also listed the same title under several headings for a fairly large number of items, thus extending the number of pages in the document without facilitating easy reference. If an entry had 12 keywords, it might appear 12 times in CRLD.

Regarding improvements in CRLD, it is understood that the DIHF will only be responsible for producing Volume III of the publication. In essence, this means that Volume III will be a catalog of only those items entered onto RANDD since the publication date of Volumes I and II. Recommendations therefore include:

(1) Reindexing post-UMI entries using the proposed A.I.D. thesaurus. Completion of this task combined with an appropriate cross-referencing subroutine might preclude producing an unnecessarily large volume. Minimally, it would produce a meaningful subject index.

(2) Use upper/lower case in the text via a conversion subroutine if necessary.

(3) Completely reformat the entire book into a more useful and visually appealing layout.

(4) Combine indices wherever possible into one alphabetically-listed index. An index such as contracts would be

retained as a separate entity, if desired. Tables 1 and 2 would be included as part of the combined subject index with references made to pages where the documents described by the terms are found. The indices themselves would be improved by use of boldface type and appropriate spacing.

(5) Develop a special section containing non-A.I.D. publications and include notations as to where to obtain copies of items listed. This would be especially useful for overseas headers of CLRD.

(6) Reposition titles on cover.

c. Suggested Improvements in ARDA.

(1) Make ARDA more current. By working with A.I.D.'s project and contract officers, we could obtain copies of contracted reports directly from them for immediate inclusion in the next issue of ARDA.

(2) Include relevant U.S. government agencies' and other development organizations' research findings. We could establish a link to the international development community, either by including an overview section of other institutions' activities or by collecting individual documents of special interest for a separate section.

(3) Regularly produce and disseminate ARDA.

(4) Make ARDA more germane to A.I.D.'s policies and development directions. In addition to making ARDA more current, cooperation with individual bureaus within A.I.D. itself will permit us to introduce a greater measure of relevancy to A.I.D.'s current directives.

(5) Provide subject indices and an annual cumulative index.

(6) Combine indices wherever possible into one alphabetically-listed index as described above.

(7) Use index terms from the new A.I.D. thesaurus to create the subject index.

(8) Update instruction and order forms. These forms need a thorough revision to improve comprehension and useability.

(9) Enhance subject area concentration. We could emphasize currently important subjects such as deforestation, rural health delivery, irrigation, protein food supplements, etc., by collecting the available research documentation on several such subjects into a given issue. Using this method, A.I.D.'s major subject areas could be updated yearly through ARDA, thus improving the usefulness of this document not only as a current awareness publication, but also as a research tool. Through the features of MINISIS and the incorporating of system modification features, other specialized lists could be spun off the data base.

(10) Analyze A.I.D. projects to identify and produce a description of A.I.D. activities involving libraries, information centers, etc., and these organizations' information tools and publications lists. Our belief is that most of this data will be derived from the information delivery components of project activities. Succeeding issues of ARDA could then include a description of one or more such project(s) and lists of publications available. We could also publish lists of copyrighted A.I.D. publications and their availability.

In addition, we plan to take a more aggressive role in identifying projects with data gathering elements and reporting this information both in ARDA and coordinating it with ESD.

(11) Reposition titles on cover.

(12) Provide ARDA users with the opportunity to express their own needs and opinions through inclusion of some type of reader reaction sheet as a regular part of ARDA. Further improvements in subsequent ARDA issues could be anticipated to follow from analysis of reader responses. We propose that an approved insert be included in the Vol. 9, No. 4, or in Volume 10, No. 1, to be published later this year.

d. Special Publications. Work on current awareness and other special publications to be published from the data base will proceed in a fashion similar to that described in numbers 1-7 above. Examples of these special data base publications are:

- (1) Accessions lists of newly-acquired titles;
- (2) Cumulative indices to the R&D, evaluation, and project document files of the data base;
- (3) Current awareness bibliographies on key subject areas;
- (4) Yearly update directories from ADDS; and
- (5) Catalogs of services, resources, and technical experts.

DIHF personnel will work closely with DIU's project office to develop five special new publications each quarter in order to meet the contract requirements for 20 per contract year. The topics and contents will be chosen to meet the current needs of A.I.D.'s information users. One way to assess these needs will

be ongoing analysis of information queries directed to DIU and the DIHF.

Two types of data base products not yet discussed are statistical reports and tapes.

e. Reports. Progress reporting to A.I.D.'s Project Officer will involve the production of a number of statistical and narrative reports. MINISIS' report generating capabilities will permit detailed, sophisticated regular and special reports revealing the status of each DIHF functional activity. The DIHF project director will prepare a monthly progress report summarizing:

- (1) Work accomplished in the previous month;
- (2) Number of items in each processing stage;
- (3) Progress on any special activities;
- (4) Current statistical measures of timeliness in document processing and fulfillment;
- (5) Progress in achieving A.I.D. thesaurus milestones;
- (6) Overall data base status;
- (7) Overall status of the project in terms of budget performance; and
- (8) Other items of interest to A.I.D.'s project officer.

Problem areas will be identified and suggestions and recommendations made for correcting the difficulties. These reports will be submitted in accordance with agreed upon report schedules.

f. Machine-readable data base tapes. The DIHF will distribute data base tapes as directed by A.I.D. to other appropriate agencies and institutions.

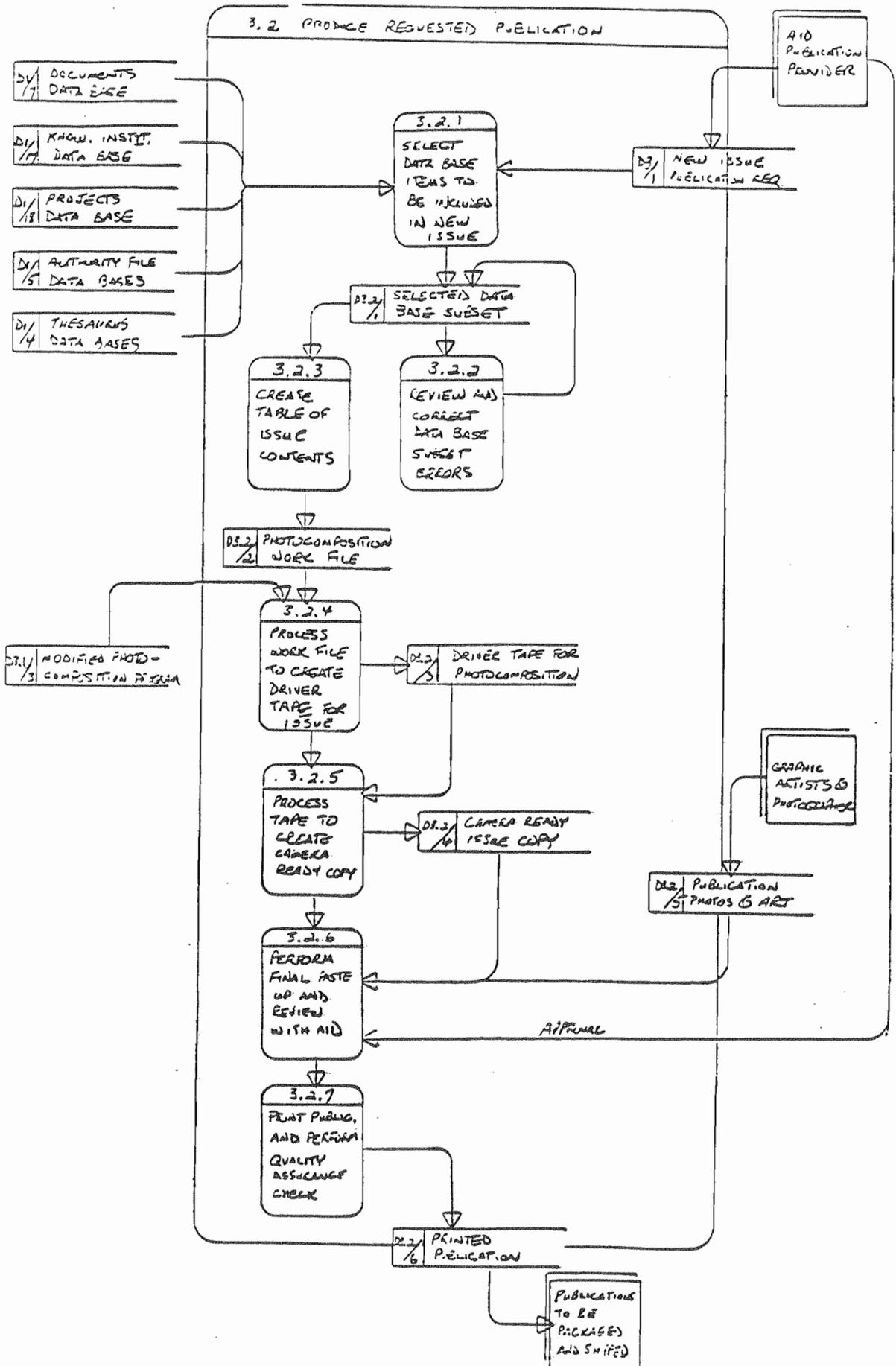
4. Data Base Support Requirements. As indicated above, MINISIS will enable DIHF to create a variety of data base products. In addition, ARDA and CRLD can be developed using CDSI's Electronic Typesetting System. Every effort will be made to identify those products that will be similar in format and which can benefit from the investment we will make in creating the instructions for the photocomposer driver tape. Exhibits IV-4 and IV-5, presented on the following pages, depict the system configuration for preparing and producing A.I.D. publications.

5. Dissemination.

a. CRLD/ARDA. It is assumed that CRLD's and ARDA's (7,500 copies to be printed) initial dissemination will be to DIU users listed on the ADDS data file (6,850 subscribers). As bulk distribution items, CRLD/ARDA will be stored in and distributed from the DIHF warehouse in Bethesda after delivery from DIHF's printer. Requests from new users for single copies and requests for additions to ADDS will be submitted to DIU for approval. Eligibility for standing orders, mass mailings, and free publications will be determined before a request is processed. The ADDS file will be regularly updated to add new users and a record of each user's request(s) will be automatically recorded upon processing each user's order. This information will be retrievable by user ID, document number, or statistical summary report.

Further details on warehousing, address labeling, and other distribution services may be found under IV.D. presented later in this report.

Exhibit IV-5
Publications Production



For those occasional requests requiring immediate delivery of documents, the DIHF will provide same-day messenger service.

b. Special on-demand publications. The first of these special publications must be produced by the end of the sixth month of DIHF operations. All dissemination activities discussed above for CRLD/ARDA will apply for these special publications. However, it is most likely that the audience for these publications will be a subset of those who receive ARDA/CLRD.

DIHF personnel anticipate that the distribution list for those special publications will include not only the individuals and institutions whose queries helped to identify the need for the document, but also those whom DIU identifies as having a general interest in the subject matter of the publication.

c. Statistical reports and data base tapes. Progress reports and tapes will be distributed to whomever DIU directs.

D. User Request Fulfillment and Dissemination and Distribution Services.

1. Definition/Purpose. In support of A.I.D.'s function to disseminate development information to users throughout the world, the A.I.D. Document and Information Handling Facility has been given the task of fulfilling requests for A.I.D. and non-A.I.D. documents and responding to requests for development information. Most of the requests come from recipients of the publication, A.I.D. Research and Development Abstracts (ARDA), and the documents ordered are generally those described in the most recent issues of ARDA. But, whatever the origin of the request, the goal of the DIHF is to log and fulfill document orders in a timely manner.

2. Current Status. Two DIHF staff members are currently sorting and processing a backlog of over 600 unfilled requests transferred to the DIHF from the previous contractor. Additional staff are processing new incoming requests and refining the processing procedures. Information is captured both on the documents requested and on the requestors. These data can be used to provide monthly reports, periodic inventories, requestor profiles, and other information needed by A.I.D. staff. Although the recording and generating of request data are currently accomplished manually, these functions will ultimately be performed using the MINISIS system.

The following is a description of the current procedures for manually logging and fulfilling incoming requests. The manual processing is only an interim system designed to respond to requests until the MINISIS system is able to provide data base support to

this task. The forms used throughout the processing were designed to be easily adapted to computer generation.

a. Logging of Requests.

(1) All incoming mail to the DIHF is divided and processed in priority order as follows:

- (a) Requests from A.I.D./W staff;
- (b) Requests from A.I.D mission staff;
- (c) Requests from LDC institutions;
- (d) Prepaid requests; and
- (e) Other no-cost requests.

(2) Once divided into these processing categories by the Request Processing Manager, each request is stamped with a Request Number comprised of the receipt date and a sequential processing number.

(3) Two DIHF Request Processing Forms have been designed: one for non-paying requestors, and another for prepaid requestors. The appropriate Request Processing Form is filled out (Exhibit IV-6 and IV-7) and stamped with the corresponding request's unique Request Number. All essential request data are recorded on the Form, including title, PN number, pagination, and format of the documents requested; the address, recipient code, and type of requestor; and the priority order and due date for fulfilling the request. Original request letters are kept in a monthly file, and only the Request Processing Forms are circulated to appropriate DIHF staff for request fulfillment.

(4) All request data are verified at the logging-in stage. The mailing address and recipient code are checked against the ADDS data base. Document titles and PN numbers are checked against the RANDD data base. Any discrepancies found through the

Request No.: _____
 Log-in (initials): _____

DIHF REQUEST PROCESSING FORM

Recipient Code: _____

Requestor Type: AID/W AID Mission LDC Prepaid Other Free

Priority (circle one): 1 2 3 4 5 Due Date: _____

Mailing Address: _____

Microfiche Requests

PN/PD/TN Number	Quantity and Format		Title
	Dupe	Blowback	

see reverse

Hard Copy Requests

Quantity	Bin/Shelf Number	Title	PN/PD/TN Number

see reverse

Send Via: AID inter-office mail First Class Air Mail AID Air Pouch Parcel Post

Notes:

Request Fulfilled: Date _____ Initials _____

Request No.: _____
 Log-in (initials): _____

DIHF PREPAID REQUEST PROCESSING FORM

Requestor Code: _____

Requestor Type: AID/W AID Mission LDC Prepaid Other Free

Priority (circle one): 1 2 3 4 5 Due Date: _____

Mailing Address: _____

Microfiche Requests

PN/PD/TN Number	Quantity and Format		Title	Number of Fiche
	Dupe	Blowback		

see reverse (sub)total: _____

Hard Copy Requests

Quantity	Bin/Shelf Number	Title	PN/PD/TN Number	Pages

see reverse (sub)total: _____

Document Cost: Total Fiche _____ x \$1.08 = \$ _____

Total Pages _____ x \$.13 = \$ _____

TOTAL = \$ _____

Postage: \$ _____

GRAND TOTAL (Amount Due): \$ _____

Amount Enclosed: \$ _____ (Check No.: _____)

Invoice Amount: \$ _____ (Invoice No.: _____)

Send Via: AID inter-office mail First Class Air Mail AID Air Pouch Parcel Post

Request Fulfilled: Date _____ Initials: _____

verification process are noted both on the original request letter and on the Request Processing Form, and are resolved by DIHF staff whenever possible.

(5) Checks enclosed with prepaid orders are stamped for deposit into a special DIHF bank account, xeroxed, and the copy attached to the original order. The amount of the check is recorded on the DIHF Prepaid Request Processing Form, then verified against the actual amount due for production and mailing of the documents ordered. Checks in the correct amount are hand-delivered, with a photocopy of the corresponding Request Processing Form attached, to the DIHF Cash Controller who records each check and delivers it directly to the bank. Checks over or under the correct amount due are returned with an invoice for the correct amount. (The DIHF will continue to use SMA's document production cost estimates until cost statistics can be gathered over a period of 4 to 6 months. At that time production cost estimates can be adjusted as necessary.)

b. Fullfillment of Requests.

(1) As batches of Request Processing Forms are completed in priority order, appropriate mailing labels are typed and attached to the corresponding forms. Mailing labels include both the requestor's address and request number for easier tracking.

(2) The Forms and attached labels are brought to the DIHF micropublishing staff for production of microfiche duplicates or blowbacks, or to the DIHF library/warehouse staff for pulling of in-stock paper documents.

(3) Any problems in completing an order are noted on the Request Processing Form which is then returned to the Request Processing Manager for resolution. In the case of orders that can only be partially filled, the Manager addresses the appropriate correspondence to the requestor, attaches the correspondence to the Request Processing Form, and resubmits the form to the production staff.

(4) The staff member who completes a request places his/her initials and the completion date on the Request Processing Form.

c. Mailing

(1) The DIHF Mail Clerk takes the documents from each completed order; verifies that the document titles and PN numbers match those listed on the Request Processing Form; inserts the documents into an appropriate mailing envelope; inserts a standard buck slip (Exhibit IV-8), a form letter (Exhibit IV-9), or special correspondence written on A.I.D./DIHF letterhead and attaches the prepared label to the envelope.

(2) When a batch of envelopes is prepared, the Mail Clerk arranges for delivery to the Mail Room for U.S. or overseas delivery, or delivery to DIU for distribution through A.I.D. interoffice mail and A.I.D. overseas pouch.

d. Monthly Reports. The Request Processing Forms are designed to record all information necessary for monthly reports to DIU staff. The monthly reports on document request fulfillment comprise two parts: one part records the number and kind of

Exhibit IV-8
Buck Slip
UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

Reply to:

A.I.D. Document and Information
Handling Facility
7222 47th Street - Suite 100
Chevy Chase, Maryland 20815 USA
(301) 657-1730

Date: _____

We are pleased to send you the material you requested.
If you require further assistance, please contact the AID
Document and Information Handling Facility at the above
address.

Exhibit IV-9
Inquiry Response Letter
UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20527

Reply to:

D. Document and Information
Handling Facility
222 47th Street - Suite 100
Chevy Chase, Maryland 20815 USA
(301) 657-1730

Date: _____

We regret that we have been unable to complete your order as requested due to the reason indicated below.

- The order must be prepaid. A proforma invoice is enclosed.
- Insufficient funds enclosed. Please see attached invoice and issue check in correct amount.
- Overpayment enclosed. Please see attached invoice and issue check in correct amount.
- Document(s) temporarily out of stock. Please reorder at a later date.
- Request could not be identified with the information given. Please provide: ___PN number, ___title, ___author.
- PN number and title/author did not match. Please check and reorder.
- Invalid PN number. Please check and reorder.
- Other: _____

Sharon Byrne
Request Processing Manager

requests filled for specific requestor types and regions (Exhibit IV-10); the second part lists requested documents by PN number and format (Exhibit IV-11).

e. Inventories. The current stock of documents maintained for request fulfillment and bulk mailings was shipped to the DIHF in no specific order. As a result of the need to set up a request fulfillment facility as quickly as possible, documents were assigned arbitrary locations, and are identified by corresponding location numbers as well as by title and PN number. For easier accessibility to the documents, DIHF staff will prepare the publications by PN number, subject area, or other order.

Identification and processing of the shipped documents will be finished by the end of the month, and a complete inventory will be forwarded to DIU at that time.

f. Population-related Documents. The A.I.D./DIHF has taken inventory of approximately 85 different population-related documents. These documents, which have been incorporated into the A.I.D./DIHF warehouse facility, include approximately 46 Law and Population Monograph Series titles; 20 Law and Population Book Series titles; and 19 other population titles.

The documents on population are not published by A.I.D. and are not included in the A.I.D. data bases. Distribution of these documents is a service provided by S&T/DIU, on behalf of two expired population contracts formerly held by Tufts University and the Population Reference Bureau.

In addition, the DIHF will handle, from time to time, mass mailings of various population library periodicals. The

A I D - D I H F
M O N T H L Y R E Q U E S T S

Month _____ 19 _____

Requestor Type	Country	Number of Requests Filled, by Format (For Report Period)		Number of Requests Filled, by Format (Calendar Year-to-Date)		Number of Requests Filled, by Format (FY to Date)	
		Original Bulk	Paper Microfiche	Original Bulk	Paper Microfiche	Original Bulk	Paper Microfiche
LDC Institution	Africa (country) (country) TOTAL:						
	Asia (country) (country) TOTAL:						
	Latin American (country) (country) TOTAL:						
	Near East (country) (country) TOTAL:						
A. I. D. Mission	Africa Asia Latin American Near East						
A. I. D. Washington							
Others - No Cost							
Prepaid Requests							
Monthly Totals:							
Monthly Costs:							
Project Totals:							
Project Costs:							

following three mailings are planned for the near future:

(1) Two issues of an as yet unspecified periodical from the Population Reference Bureau will be sent to approximately 800 recipients;

(2) The most current issue available of the "Population Newsletter" will be sent to approximately 300 recipients; and

(3) A packet containing four brochures from the Population Reference Bureau will be sent to approximately 3700 recipients.

Since no mailing labels exist for recipients of the population-related documents, A.I.D.-DIHF staff will key-in names from address lists provided by A.I.D., thus creating labels.

Statistics for bulk mailings and individual requests for population titles will be included in the DIHF monthly report on document requests.

3. Proposed Approach. The principal proposed modifications to the current procedures for document request fulfillment will involve data base support using the MINISIS system. A number of steps required for manual processing of requests will be eliminated once MINISIS is available to capture, collate, and verify pieces of information.

Once per year, a card will be placed in ARDA requiring the recipient to return the card to continue subscriptions. This routine notice should be separate from user survey form.

A user survey form will be sent after receipt of subscription renewal form is received. We do anticipate, however, that A.I.D. will most likely want to continue to send ARDA to key people A.I.D. wants to receive ARDA, regardless of non-return of card.

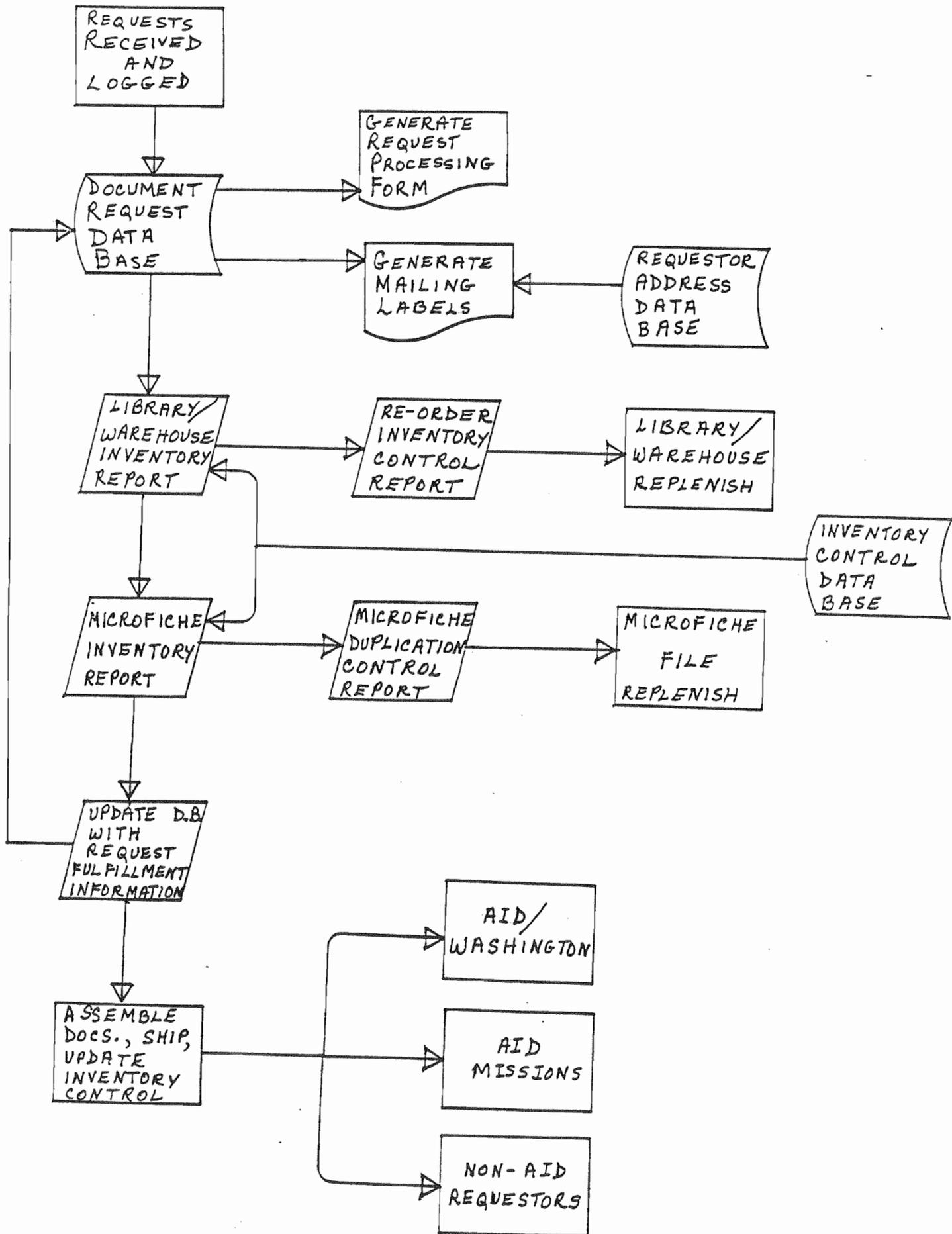
An additional element could be added to the request fulfillment process. Since ARDA recipients are a major source of the document requests forwarded to the DIHF, information could be solicited concerning requestor satisfaction with DIHF services. This might be accomplished by incorporating a detachable, pre-printed card or slip into the ARDA order form format. This part of the form could be detached by DIHF staff during request processing and returned to requestors with the documents requested. Brief questions on the card or slip would ask the recipient to rate the DIHF's response to the original order in terms of promptness, thoroughness, document quality, and other suitable elements. Those users who choose to complete and return the brief questionnaire would provide DIHF staff with an additional check on quality control.

4. Data Base Support. The introduction of data base support to the filling of document requests will greatly streamline the current manual process. As shown in Exhibit IV-12, various data stores (manual or automated) will be drawn upon to log, track, and produce reports on document requests.

The request and requestor information logged on the Request Processing Forms (Exhibit IV-6,-7) will be used as data elements for the different data stores. Once entered into the system, these data elements can be generated singly or in certain combinations to produce the following:

- a. Mailing labels;
- b. Monthly reports by requestor type, geographic region, and document format (see Exhibit IV-10);

DOCUMENT REQUEST PROCESSING



c. Monthly reports by PN number, title, and format (see Exhibit IV-11);

d. Invoice forms based on cost information listed in ARDA. For documents not listed in ARDA, costs will be based on the number of pages or fiche per document, the cost per page or fiche, and postage;

e. Requestor profiles organized by requestor type, geographic region, number and titles of documents ordered, order dates, or other categories; and

f. Inventory reports for designated time periods, organized by PN number, title, author, format, or other category. Inventory data will be used both for reports to A.I.D. staff and for internal inventory control reports.

Most of the data elements for each Request Processing Form would be filled out at a terminal. By entering certain pieces of information directly from the request letter, the terminal operator could then call up related data already stored in the computer. For example, by entering the PN number of a requested document, the operator could automatically generate the document title and its bin or shelf code (i.e., the document's location in the DIHF library/warehouse). Mailing labels would be generated in batches and, as in the current system, each label would be attached to the appropriate Request Processing Form before routing to the production and mailing staff.

Any problem orders would be returned to the Request Processing Manager for resolution. All other orders would be forwarded

to DIHF staff for completion and mailing. The initials of the staff person who fulfills a request and the fulfillment date will be entered into the computer for each request number.

Bulk mailings will be recorded in a manner similar to the recording of individual requests, for the sake of proper inventory control and monthly reporting. The actual fulfillment and mailing of bulk orders, however, will be performed by a larger number of staff members in order to process these orders in a timely fashion. Exhibits IV-13 through IV-18 depict the systems and procedures and relationship to MINISIS processing.

Exhibit IV-13
 Perform Request Logging and Routing

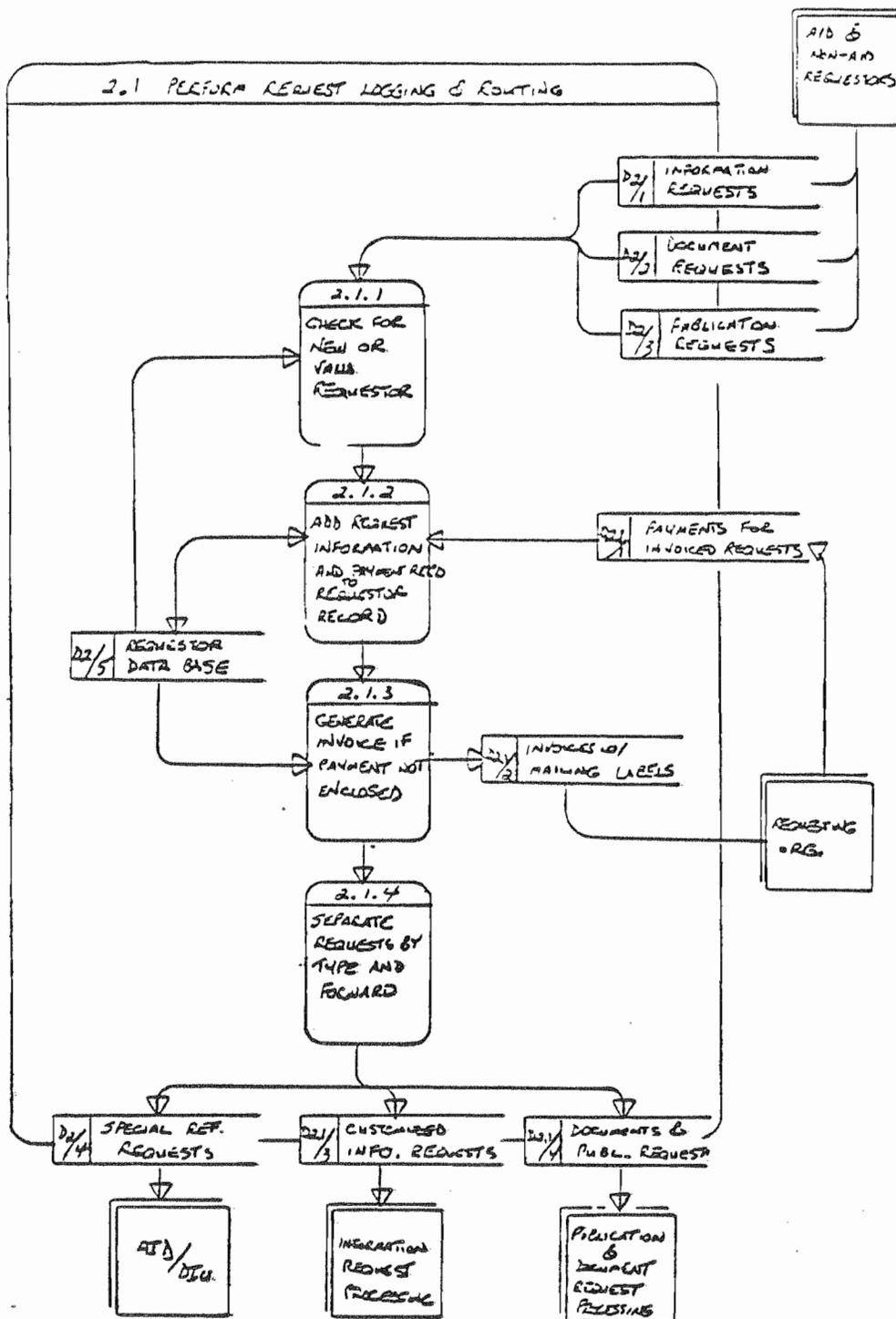


Exhibit IV-14
 Perform Information Request Processing

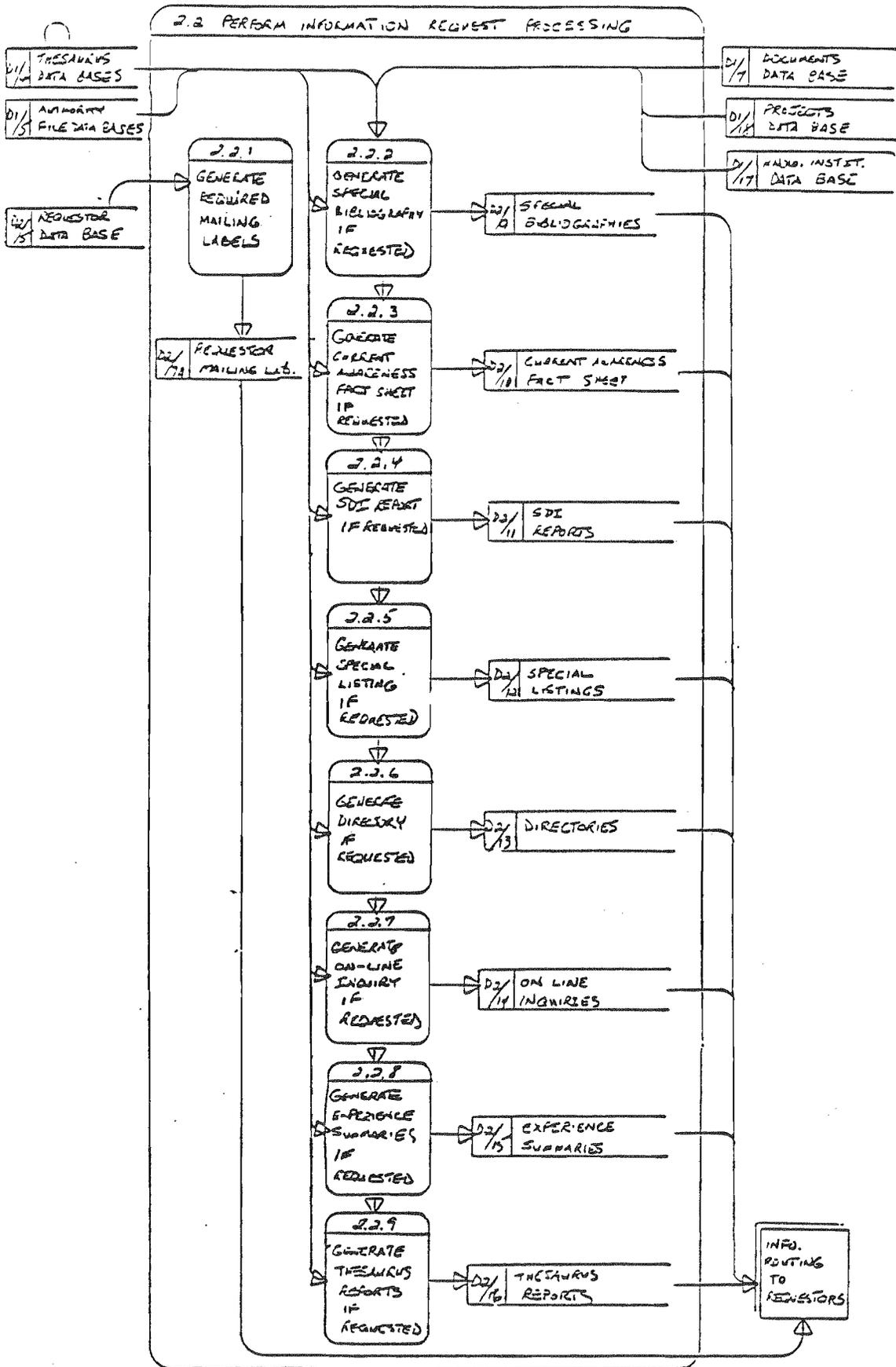


Exhibit IV-15
 Perform Publication and Document Request Processing

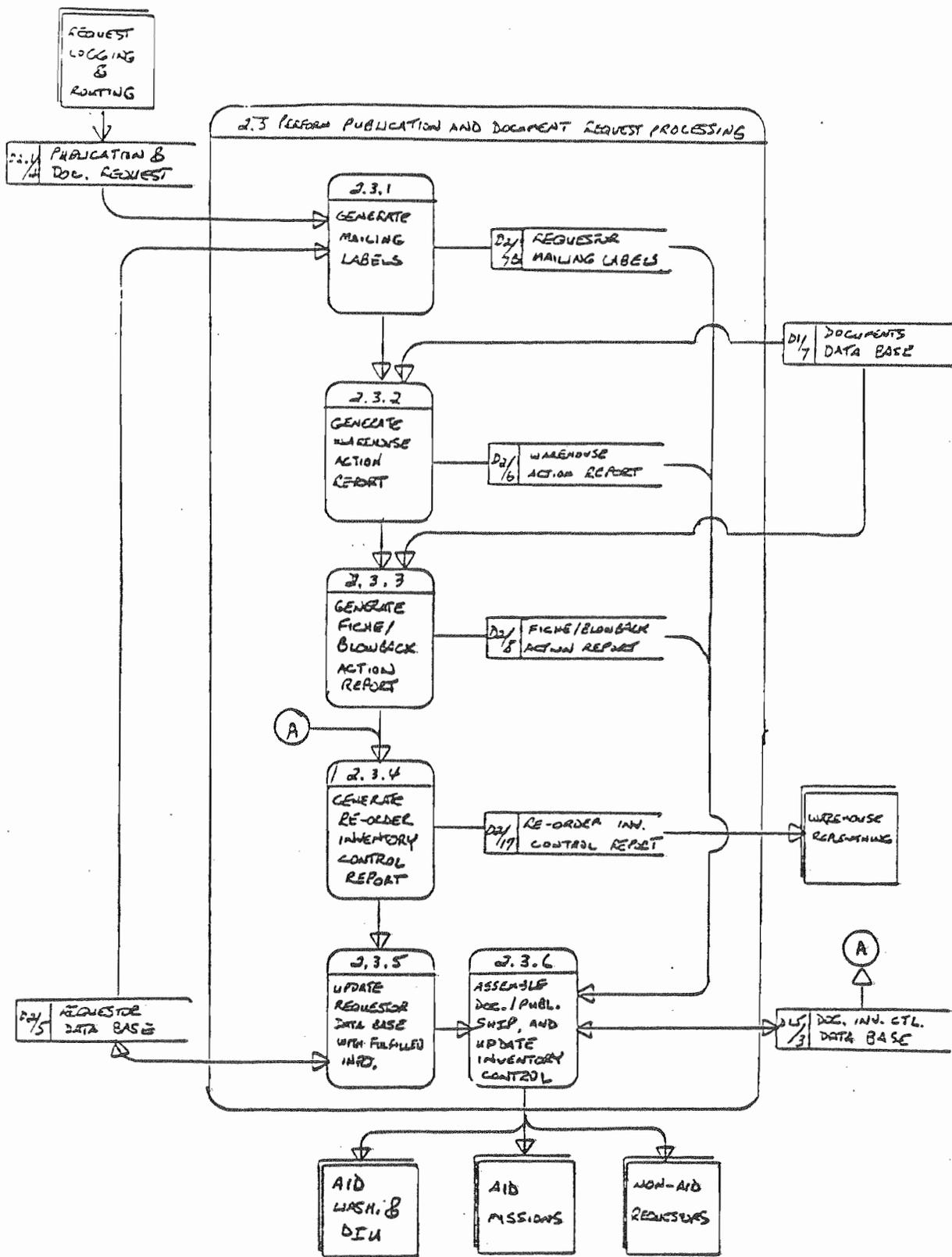


Exhibit IV-16
Route Information Products to Requestors

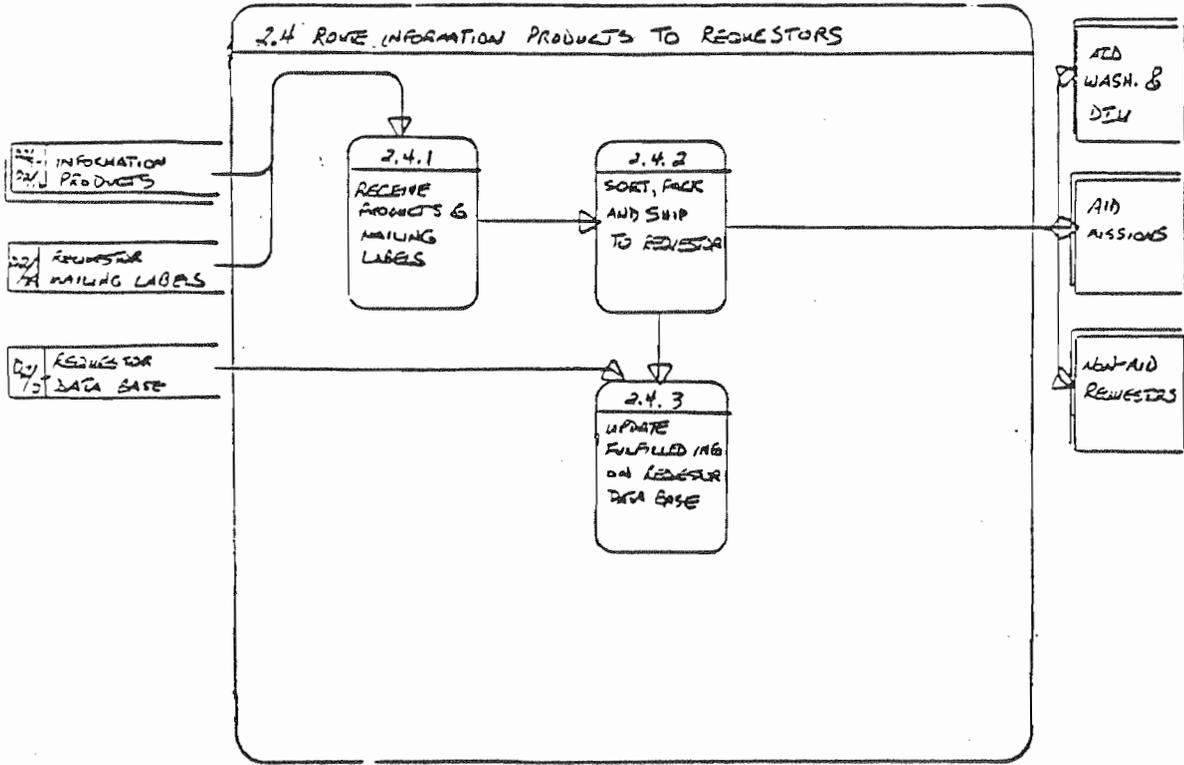


Exhibit IV-17
 Package and Ship Publications Requested

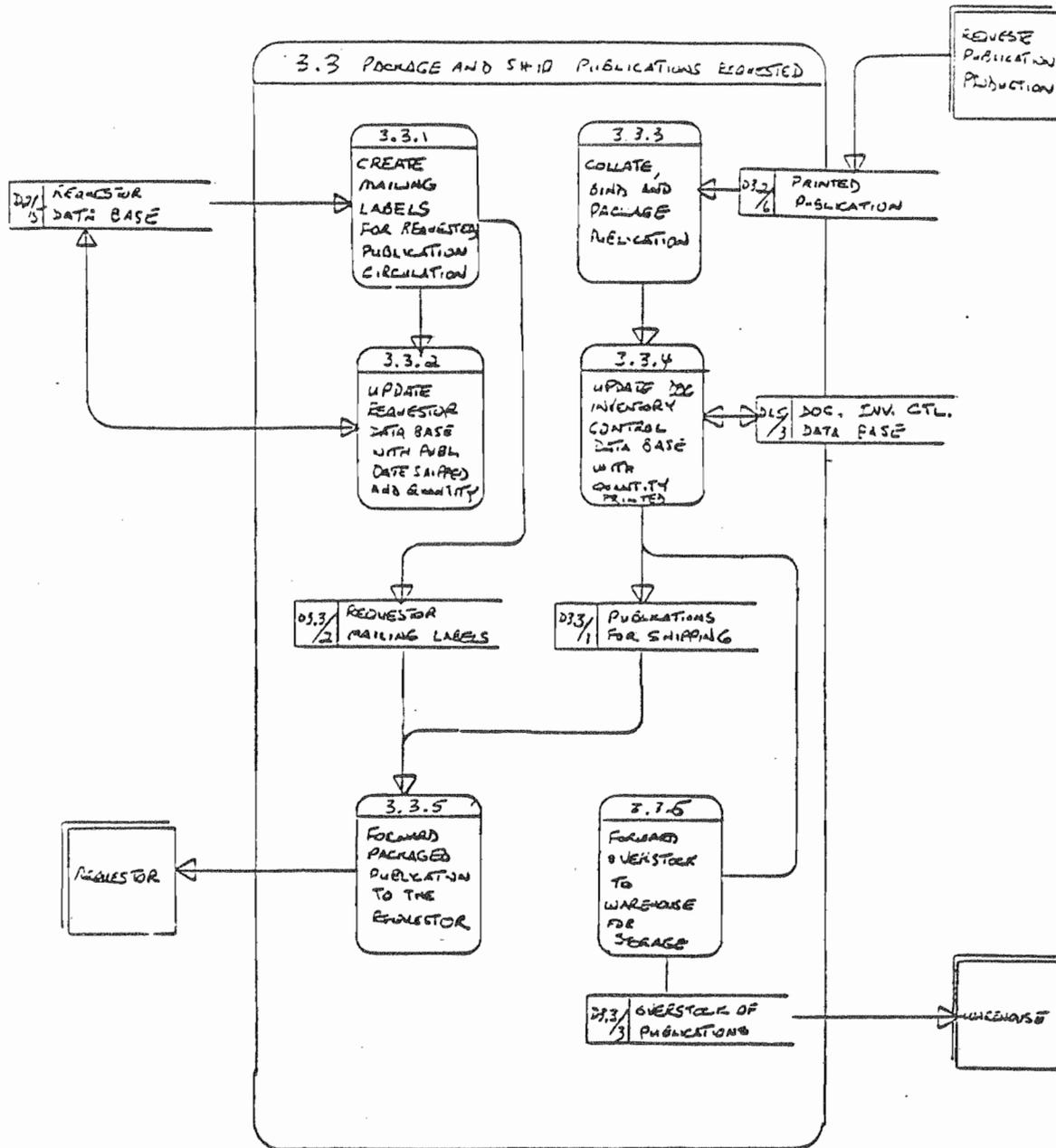
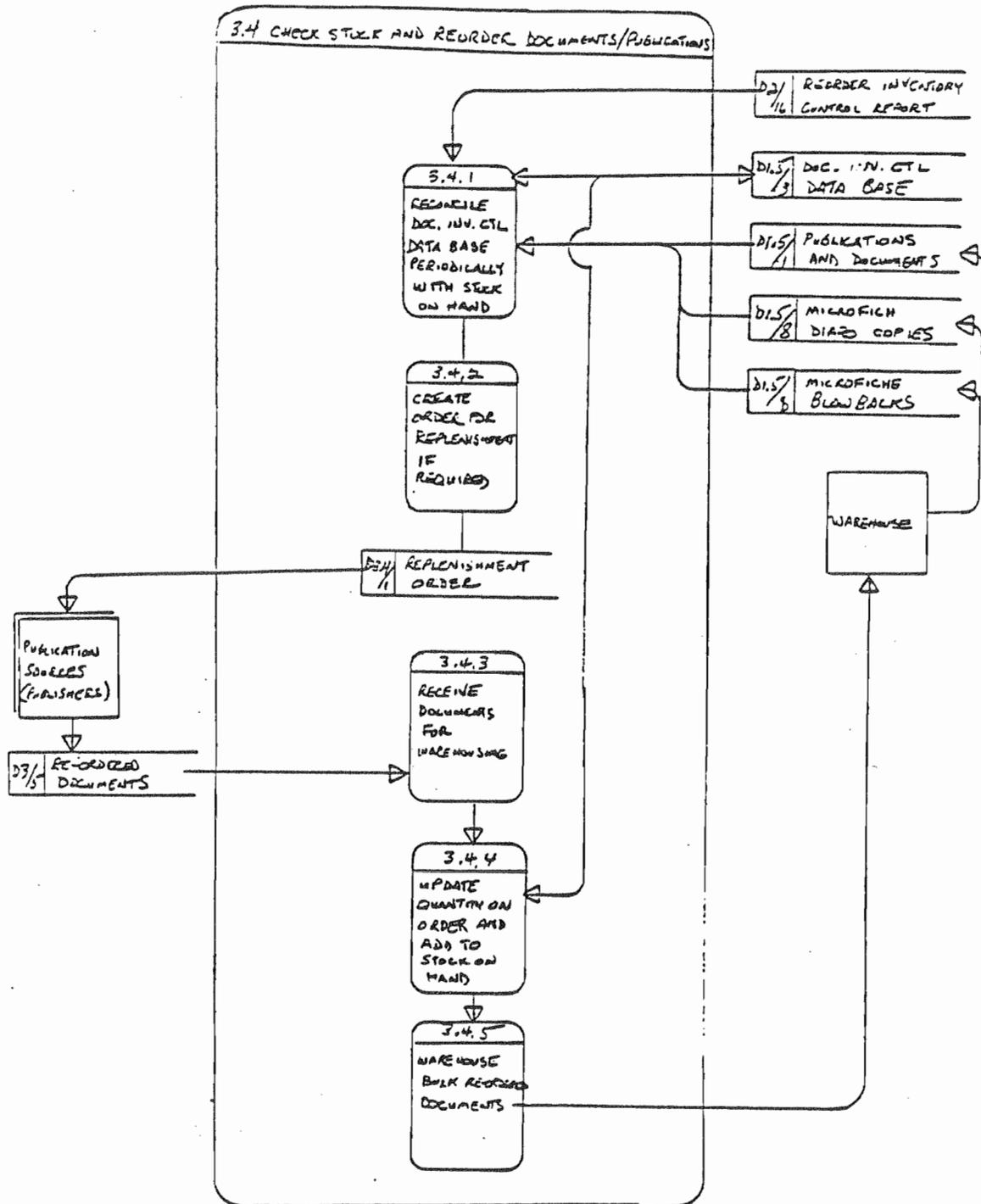


Exhibit IV-18
 Check Stock and Reorder Documents/Publications



E. On-line Inquiries.

1. Definition/Purpose. A.I.D. provides information management support to U.S. and overseas institutions and individuals who are concerned with development issues, and are involved in the design, implementation, and evaluation of development programs and projects.

2. Current Status. Many A.I.D. direct hire staff use the existing data bases for a variety of functions.

One of the major activities of the DIHF is to provide a variety of services in response to requests for information about development techniques, projects, programs, and associated technology.

Inquiries for assistance come from:

- o A.I.D. Missions;
- o LDC Institutions;
- o International Donor Organizations;
- o PVO's;
- o Bilateral Donor Organizations;
- o A.I.D./Washington
 - State Department
 - Congress
 - Other Government Agencies
 - Contractors doing business with A.I.D.;
- o Peace Corps; and
- o Business/Industry.

Some requests are fulfilled by sending a copy of existing materials; others may require detailed analysis, special searches and information compilation.

a. Information Centers - Both centers use the existing data bases for subject searching and to respond to on-demand bibliographies. Approximately 12,000 reference and information analysis queries are received per year; 1800 on-demand bibliographies are provided to LCDs, USAID and A.I.D./W per year.

The A.I.D. Reference Center does 50% online; 50% manual searching. Since the A.I.D. Reference Center has the strength of the card catalog, the results of on-line searches are compared to subject cards in the catalog. If the request is from a primary user group such as LCD or A.I.D. mission, a manual search may be prepared by copying the appropriate subject cards from the card catalog. The cards do not include abstracts but selected items are chosen on the basis of relevance to the search topic.

ARC, located in Room 1656 in the New State Building, is adjacent to project designers, implementors, and evaluators, and the organization is a regular user of DIS. Because of their areas of interest, ARC customers less frequently use DIU technical literature collection.

The Development Information Center relies on the RANDD data base for preparing bibliographies in response to queries.

DIC, located in Room 105-SA-14, (Pomponio Plaza) is located in the same building as the Science and Technology Bureau which houses the major users and producers of research and development materials listed in RANDD.

b. Evaluation Offices - A.I.D. evaluation officers are major users of the data bases. Consideration is being given to

discontinuing PBAR. A new Program Evaluation Summary (PES) form is being designed which will impact on the data base system.

Program evaluators presently use the logframe data (specifically goal, purpose and output abstracts) from TEXT in generating their reports. Any new system changes should take this requirement into consideration. Code searching is also frequently done by evaluation staff. Data bases are currently searched by using special purpose and technical codes, and project numbers.

c. Other Users - The DIHF staff will be major users of the present INQUIRE system and also of MINISIS for acquisitions and processing (duplicate checking), document fulfillment (publication numbers), etc. A potential exists for increased numbers of on-line users of the system. However, their use will be dependent on an aggressive training component, manuals, and the availability of terminals and ports.

3. Proposed Approach. An analysis of the INQUIRE system in its current use reveals that there are potentially three distinct user groups. Our goal, therefore, is to provide information useful to each of them. Ramifications of the three respective user groups are described below:

a. The information centers are probably the most sophisticated users of the system. As trained specialists in the manipulation of data and data bases, their primary need is to retrieve relevant information quickly. The fact that one center uses RANDD more than the other raises some questions:

- o Is the indexing too comprehensive or too inadequate?

- o Is it difficult even for information specialists to keep three vocabularies in their head at one time? (Refer to Exhibit IV-19).
- o Are the search strategies developed in response to queries, a function of the system and/or staff expertise. Does each center get unique questions which determine the response?
- o Do the nature of the requests depend less on RANDD than on other resources to supply answers?

The response prepared by the centers is a document-specific response. The product is essentially a bibliography that may include an abstract for each item listed.

b. Evaluation offices are heavy users of the present system. Their need is for synthesized data relating to projects. The emphasis here is quite different than that of the information center.

Project evaluators are looking for detailed document analysis (document surrogates). Their demands are not dependent on document retrieval, however. Instead, through a combination of keyword and code searching, the goal is to create a project picture including funding statements, and project descriptions or logframe information, such as: subprojects, location, time, subject and number.

Our intent is to provide, through the MINISIS system, both document specific and project specific retrieval.

c. LDCs and missions are also intended users of the proposed system. At the present time their needs are satisfied by the reference and search services through the Development Information Center and the A.I.D. Reference Center. In the future, once Phase III of the DIHF is implemented, these users will have direct access to

EXHIBIT IV-19

COMPARISON OF INDEXING FOR A DOCUMENT ON RANDD,
LIBRARY OF CONGRESS AND NTIS

PN-AAH-530

Nesman, EG; Rich, TA; Green, SE

Individual, Family and Village Literacy in Development

South Florida University

1980, 161 p. (Basic Village Education Project)

RANDD	LIBRARY OF CONGRESS	NTIS
Agricultural technology	Education, Rural - Guatemala	Behavior
Agricultural training	Education & Rural development - Guatemala	Developing Countries
Guatemala	Literacy - Guatemala	Farms
Literacy	Modernization - Guatemala	Literacy
Rural education	Project analysis - Education, Rural - Guatemala	Rural Areas
Technology Adoption	Technology adoption - Guatemala	
	Also:	
	Nesman	
	Basic Village Education Project (series)	
	Title	
	Contract	

the DIS through MINISIS without going through an intermediary for data base searching or reference services.

The system should be designed so that this phase can be implemented expeditiously while providing those services required by the missions and LDCs. While our proposed system is geared to document specific retrieval, it will also be responsive to the need for project specific information.

The projects data base will consist of two basic parts. One part will consist of nine-digit project numbers, abstracts, keywords, and supplementary information entered by DIHF staff. The other part will consist of information provided by A.I.D. from one of its data bases such as PBAR. The A.I.D.-provided data will include an authoritative list of seven-digit project numbers, titles, start/end^s dates, project status, and funding amounts. The information entered by DIHF staff will remain more or less static, while the A.I.D. component will be more a module that could be periodically deleted and re-loaded. In MINISIS terms, the Project Data base will be a data submodel connecting the abstract/index relational definition with the A.I.D./PBAR relational definition. The field joining the two components will be the seven-digit project number. This configuration allows us maximum flexibility: We can update A.I.D. project data periodically without having to perform a global modification; we can also more easily accommodate changes in data elements/structure of the A.I.D.-provided data base.

The DIHF will have to keep abreast of changes in project numbers made by A.I.D., since this is the key relating the two

project data base components. For instance, when A.I.D. changes a project number, the project number on the DIHF project data base will also have to be changed. Sometimes a project is disapproved or cancelled but the project number is recycled and assigned to a new project by A.I.D.. In such cases, the connection between the two data bases will exist but will be an errant connection--the project will not really relate. To spot such changes, the DIHF staff will periodically verify DIHF project titles and the A.I.D. project titles (both title fields will be captured on the project data base, with the DIHF-assigned title being the one used for reporting). We will also update the corresponding project number whenever it occurs on the document data base.

The project data base will contain a comments field, for DIHF internal use to contain such comments, such as "Project was removed from PBAR data base because..." or "Project used to be 5260262 but the mission reused that number for a different project".

Problematically, however, the bulk of the text in a project description is taken from a single design document, which is often the original. Information contained in subsequent design documents is added to the project description by tacking on new paragraphs. We must examine whether it is necessary to enter the document number for each paragraph, or just enter the reference to the original design document once for the first several paragraphs of the project description, then enter new references for the subsequent update paragraphs.

There are two purposes for inputting these document references:

- (1) Users of the document data base can, if they wish, retrieve design documents and view the project design abstracts as if they were a regular abstract of the document. In other words, the document data base can be completely self-contained. Whereas, in the past, design documents on BREF contained no abstract.
- (2) Project descriptions on the project data base will contain a document source reference, a kind of footnote. In the past, the source of information for project descriptions could not be traced to one particular document.

d. The interrelation between the projects data base and the documents data base is evident by the reports resulting from a search question. The report options are:

(1) Project oriented reports:

Query selects list of projects, and the report supplements project information. The user will be able to specify the following report options:

- o Amount of project data to be output?
(Project number, title, funding amounts, "brief", full abstract, logframe, etc.)
- o Include bibliographic information?
- o If yes, which ones?
(all documents, just evaluations, just audits, just design documents, etc.)

How to sort them?

(by document type, date, etc.)

Print them directly after each project description (with documents relating to more than one project being printed out more than once)? or,

Site the documents after each project, and print out the full document information as part 2 of the report. Part 2, if sorted by project number, would have control breaks at the project number level and would print out all

documents related to the control project number, with multi-project documents being printed out more than once. Part 2, if sorted by some other field, such as document ID number, would print out the documents in that order, with multi-project documents being printed out only once. (Projects will be related to documents at the subproject level, 9 digit project number.)

(2) Document oriented reports:

Query selects list of documents. The report contains a printout of:

- o citations
- o citations w/abstracts
- o citations w/abstracts, w/related project information sorted by title, author, pubdate, doc type, project #, or whatever

The document oriented reports are basically the inverse of the project-oriented reports.

A retrieval path through the documents is necessary. For instance, a user needed information about project management experience.

Certain audit reports have extensive information on project management questions, but "project management", as such, was not a key subject area of the audited project.

(3) Two-step responses:

First, a project-oriented report must be produced, analyzed, and projects of interest must be selected, perhaps breaking this selection down into several groups of related projects.

This list is then used to produce a document-oriented report.

The query or index processor output which produced the first project oriented report would be saved. The saved project list could be manipulated by the user, perhaps with the help of a computer program, to produce the selection criteria for the second-step document report. The major point here is that a standard query selection is insufficient for some information needs. The user

should be able to review a preliminary list of projects and select, on an individual basis, the projects of interest for more detailed reports.

(4) Expertise reports:

The Expertise Reports can be part of the two-step response reports or can be separate reports.

Their aim is to answer the following questions:

What is the institutional involvement in this project?

(Provide project-specific abstracts of various institutions)

What has this institution done for A.I.D.?

(Provide abstracts relating to multiple projects for a single institution)

Which institutions have expertise in the field of X?

(Provide abstracts relating to multiple projects for several institutions).

At the present time, we will provide RANDD searching using INQUIRE, for requests received at ARC and DIC, or directly at the DIHF, and create special responses for them. The document yields listed will then be pulled from inventory or created in fiche/blowback. The material will then, along with a cover letter, be forwarded to the requestor. The above searching techniques will be applied in the process.

In response to requests requiring on-line searching, a file of searches will be maintained in case similar requests are received again. These "canned" searches represent a valuable tool in providing prompt service. However, prior to sending materials overseas, any listings or mini-bibliographies will be annotated

to make the information more useful to the reader who does not, at present, have access to the items to examine. Subsequently, as the DIHF concept evolves, and more missions have both the tapes and the fiche collection, search requests from these users should diminish, and DIHF will concentrate on satisfying requests from those users not in the network. Again, the information must be annotated so its utility can be determined prior to actually ordering documents.

Following adoption of recommended changes in the DIS System, searching of RANDD and related projects/documents files via MINISIS will be employed.

V. DIHF PROGRAM AND OPERATIONS MANAGEMENT

A. Goals and Objectives.

1. Discussion of Requirements. Our proposed evaluation plan will focus on efforts to (1) achieve better application of development technology in the field; and (2) to make development information available to organizations and individuals in a more timely and efficient fashion. The billions of dollars spent each year on development efforts may be optimized if better knowledge about past successes and failures is made known to officials who are responsible for initiating and funding development projects.

Our strategy for achieving these general objectives will be to:

- o Acquire and process A.I.D. documents and research and development reports;
- o Supplement these with commercial or non-A.I.D. publications which provide a broader information perspective;
- o Establish a system which is largely computer based to support the various administrative and information processing support functions;
- o Disseminate information through on-line searching; document ordering/delivery; direct distribution; micropublishing; or the creation of abstract bulletins, catalogs, fact sheets or other data base publications.
- o Commence efforts leading to tie-ins to world-wide data and information resources and establish working relationships with major institutions and networks involved in development activities.

Each of these activities, however, will be tailored to different user groups and target audiences. Exhibit I-1 depicted our analysis of the types and levels of service A.I.D./DIHF users will require. Priorities on when these services will be provided will evolve over the life of this project.

In evaluating the DIHF, we intend to look at the quantitative aspects of the services as well as the quality of the products, systems, and procedures. The quality of the services will also be evaluated, such as, compliance with priority response deadlines. The usefulness of the information being conveyed, based upon reader/user reaction; the search trails for on-line users; and the accuracy of the information being conveyed will also be indicators of the quality of services.

We envision three types of evaluation for DIHF:

- a. Internal operations;
- b. User satisfaction;
- c. Impact of clearinghouse services.

Since the cost of obtaining information about such an operation will have a direct bearing on the level of evaluation possible, our efforts will be directed to providing evaluation data as a by-product from MINISIS processing. MINISIS is ideally suited for such purposes and makes it possible to create reports without excessive support for data manipulation.

Our primary evaluative effort, therefore, will be to provide A.I.D. management with data on DIHF internal operations; our evaluation of user satisfaction will be of secondary concern at present, and lastly, information on the impact of clearinghouse services will be examined.

In terms of evaluating internal operations, we have listed throughout this report the various reports we intend to submit on the various operational components of the system. In brief, we have summarized them as follows:

- (1) Acquisitions
 - o Resources tapped: types, variations, breadth, and depth;
 - o Numbers obtained;
- (2) Processing
 - o Documents obtained;
 - o Documents processed;
 - o Documents stored in data base;
 - o Documents filmed;
- (3) Parameters on operation
 - o Quantities over time (fiscal and calendar years);
 - o Quantities by type, category, and source;
- (4) Services
 - o Number of requests;
 - o Types of requests by sources and user;
 - o Repeats;
 - o Documents or fiche distributed;
 - o Hard copy distributed;
 - o Bulk quantity distribution;
 - o On-line searches;
 - o Hit ratios/satisfaction of users.
- (5) Products
 - o Types and numbers of publications, fact sheets, bibliographies;
 - o Items ordered from ARDA;
 - o User reaction (comments, degree of satisfaction);
 - o Format, usefulness of publication.

Further aspects of the evaluation will address the overall questions of:

- o Is DIHF doing a good job?
- o If so, what is it accomplishing?
- o Do target audience groups know of DIHF, its services; publications? If not, why not?
- o Why do some groups use DIHF and others not?
- o How are the information, products, or services of DIHF used, and what impact have they had on the user or the situation that led to the request for the information?
- o Do users have perceptions of DIHF (or DIU/DIS) and the utility of its services/products? If so, what are they?
- o How does DIHF compare to other development information operations?

2. Evaluation Plans. As stated earlier, our efforts will be directed to allowing A.I.D. to answer questions on DIHF's efficacy (to Congress, OMB, GAO, etc.) and to providing internal management with the raw data to use in determining the level of DIHF operational effectiveness. Greater emphasis on the precise evaluation parameters will occur following review of this report, the adoption of specific system recommendations, and a clearer definition of those aspects of the operation that A.I.D. wishes to analyze.

3. Operations Manual. To provide a better understanding of how the DIHF will operate, our next efforts will be to prepare an Operations Manual. As required, we will prepare and submit chapters of the manual as various functional aspects of the Facility become fully operational, the system/software support requirements developed, and all approved by A.I.D. Exhibit V-1, presented on the following pages, is the proposed Table of Contents for the Operations Manual. It will be prepared in loose-leaf form for updating; will be

Exhibit V-1
Proposed Contents of Operations Manual

AGENCY FOR INTERNATIONAL DEVELOPMENT
DOCUMENT AND INFORMATION HANDLING FACILITY
OPERATIONS MANUAL

1.0 DIHF SYSTEM CONCEPT

- 1.1 Purpose of System
- 1.2 Overview of System Configuration
- 1.2 How to Use Manual

2.0 ACQUISITIONS

- 2.1 A.I.D. Project Documents
- 2.2 A.I.D. Research & Development Reports Describes procedures/ steps up to point before documents are processed.
- 2.3 Serials/Journals
- 2.4 Commercial/Trade Publications How does DIHF physically identify and get actual copy of material. Cross-refer & tie in to § 5.0
- 2.5 Development/Agency Publications
 - 2.5.1 U.N.
 - 2.5.2 World Bank (IBRD)
 - 2.5.3 IDRC
 - 2.5.4 EEOC
- 2.6 Reporting

3.0 Subject Authority File (Thesaurus)

4.0 Non-Subject Authority Files

5.0 Document Processing

- 5.1 Descriptive Cataloging
 - 5.1.1 A.I.D. Documents
 - 5.1.2 A.I.D. R & D Reports
 - 5.1.3 Serials/Journal Articles
 - 5.1.4 Commercial/Trade Publications
 - 5.1.5 Development Agency Publications
- 5.2 Card Catalog
- 5.3 Book Catalog
- 5.4 Analysis
- 5.5 Abstacting
- 5.6 Indexing

6.0 Filming

- 6.1 Types of Documents to be Filmed
- 6.2 Document Preparation/Job Set-Up (Batch Controls)
- 6.3 Filming
- 6.4 Quality Controls
- 6.5 Storage
- 6.6 Distribution/Updating of Fiche Jackets within Bureau
- 6.7 Statistics/Reporting

AGENCY FOR INTERNATIONAL DEVELOPMENT
DOCUMENT AND INFORMATION HANDLING FACILITY
OPERATIONS MANUAL

- 7.0 User Audiences
 - 7.1 Identification/Categorization
 - 7.2 User Needs/Requirements
 - 7.3 Authorizations/Approvals for Inclusion in System
 - 7.4 List Maintenance
 - 7.5 Profile Analysis/Updating
 - 7.6 Reporting

- 8.0 Micropublishing
 - 8.1 Fiche Duplicating
 - 8.2 Paper Copy Reproduction
 - 8.3 Statistics/Reporting

- 9.0 Data Base Publishing
 - 9.1 Types of Publications
 - 9.1.1 A.R.D.A.
 - 9.1.2 Catalog of literature of R & D.
 - 9.1.3 Special Bibliographies
 - 9.1.4 Experience Summaries
 - 9.2 Copy Preparation
 - 9.3 Photocomposition Driver Tape
 - 9.4 Camera-Ready Copy Preparation
 - 9.5 Printing

- 10.0 User Request Fulfillment
 - 10.1 Receipt/Control of Requests/Priority Determination
 - 10.2 Analysis of Requests
 - 10.3 Financial Accounting
 - 10.4 Processing/Request Fulfillment
 - 10.5 Use Statistics Collection
 - 10.6 Reporting

- 11.0 Online Searching/Reference Service
 - 11.1 Determination of Requestor Eligibility
 - 11.2 Development of Search Strategies
 - 11.3 Response/User Follow up
 - 11.4 Document Delivery
 - 11.5 Statistics/Reporting

- 12.0 Dissemination Services
 - 12.1 Bulk Shipments
 - 12.2 SDI Profile Responses
 - 12.3 A.R.D.A.
 - 12.4 Special Dissemination Requests
 - 12.5 Statistics/Reporting

maintained on MINISIS and HP WORD to facilitate updating; and be revised periodically as changes in procedures and operations occur.

A corollary systems manual, which provides detailed instructions on the hardware/software operations, including file structures, programming linkages, and system conventions will be developed and installed on MINISIS for ease in updating and access by the DIHF Systems Manager and A.I.D. counterpart.

Appendix A

GLOSSARY

To assist the reader in understanding the terminology and concepts used in this report, the following glossary of terms is provided. They reflect current usage within the Hewlett-Packard hardware/software context and as applied to MINISIS.

- Account - a unit within the MPE accounting system
- Authority File - a file of allowable values for a field, or terms or words within a field, in a Master record. The authority file is a KSAM data base
- Batch - a way of using the computer in which all the commands are placed in a field, instead of coming from the terminal, allowing the batch job to run unattended
- Bibliographic Level - a classification system to unambiguously determine the kind of document a record describes. MINISIS currently supports 4 bibliographic levels: Monographic, Collective, Serial Analytic, Analytic of Monograph
- Bit - the basic unit in a computer's storage. A bit may be on (value=1) or off (value=0)
- Bit String - a method used within MINISIS for storing postings in a fast access file
- Byte - the amount of computer memory needed to store one character. One byte contains 8 bits. A word contains 2 bytes
- Conceptual Level - a set of information that defines the relationship between fields on an ISO exchange tape, and those in a MINISIS data base; also called CD
- Data Definition - the total description of a data base, describing the user definitions, the system files, and the conceptual relationships between them.
- Data Base - a collection of records; a user view
- Data Model - the name of a group of related relations, projected subsets and data submodels; physically represented by the data definition file

GLOSSARY

- Data Submodel - the name of a user view resulting from the combination of relations and/or projected subsets using various join operations and initial restrictions
- Descriptor - the word or words used to describe a concept within a thesaurus structure
- Domain - field
- Domain Definition - field definition
- EDITOR - a program provided with the HP computer, and used to change the contents fo certain files. Hence: EDITOR-compatible files
- Fast Access Field - a field from which keys are extracted and loaded into a fast access file; also called an inverted field
- Field - the smallest section of a record, containing the strings referred to as data
- Field Definition - the definition of the attributes of a field, as specified in a data definition
- File - within the computer system, the place where data is stored. Files may be on magnetic disk (disk files) or magnetic tape (tape files)
- Group - within MPE, a group is part of the accounting system. All users must log onto some group within their account. All files reside uniquely within a group directory
- HP - Hewlett Packard -- the manufacturer of the computer on which MINISIS runs
- Hitfile - a list of ISN's of the records satisfying a query
- Initial Restriction - a set of query-like statements entered as part of a data base definition, which restricts access to a particular data base according

GLOSSARY

- to the contents of the records, at the time the data base is opened
- Interactive - a computer system designed to work from terminals, using dialogue with a user, instead of cards, etc.
- Invert - create a list of all records containing a key; the result is called an inverted file (also a fast access file)
- Join - to "merge" two relations and/or projected subsets based on the existence and value of a field occurring in both of them, to create a data submodel (DS)
- Key - a set of characters that uniquely identify a record in a KSAM file
 - a field, or an element of a field, in a Master-format record, which is "inverted" to provide a fast access path to the record
 - a record generated by INDEX
- KSAM File - an indexed sequential file created and accessed through the HP KSAM software
- Master Format - MINISIS data bases stored in Master/Xref file pairs, in which records and fields are truly variable length
- Master/Xref File - a pair of files containing Master format data. The Xref file contains pointers to each logical record in the Master file
- Mnemonic - a code of up to six letters, defined by the data base manager, used to identify a field
- MPE - Multi-Programming Executive - the HP operating system, which controls all the activity on the computer system, including logging people on and off, creating and managing files, etc.
- Output Field - a field created by COMPUTE or INDEX, into which sorted or computed data goes. Output fields reside in output files. Also known as pseudo-fields

- Postings - lists of ISNs of records containing a key
- Print Format - a description of how records are to be printed, either on the terminal or system printer; created in PRINT
- Processor - a unit performing one set of functions within the MINISIS system; i.e. ENTRY
- in more restricted terms, a MINISIS program which asks for a data base name (under security)
- Projected Subset (PS) - a logical structure which is a physical subset of a relation (RD)
- Pseudo-field - a field which is defined in a processor other than DATADEF; i.e. fields which are used to store output from COMPUTE or INDEX
- Pseudo-DD Files - files created by INDEX and COMPUTE to hold field definitions of pseudo-fields
- Record - a logical collection of related fields
- Relation (RD) - a one-to-one mapping of a collection of domains to a physical file; the basic entity within MINISIS
- Repeatable Field - a field which may occur more than once; a repeatable domain is a set-valued domain
- Result Field - in COMPUTE, the result of vertical and/or horizontal operations. Each result field produces at least one output field
- Security - an operational method (optional) in which user access to data bases is restricted by the data base manager
- Software - computer programs
- STREAM - indicate to MPE (the operating system) that a batch job is to be run, using commands entered into an EDITOR file

GLOSSARY

- Structural Term - in QUERY or THLOADER, terms related to the thesaurus operators BT RT NT ANY. FT. A term that may legally appear after any of these operators is a structural term
- Subfield - a field which exists both individually and at the same time as part of a group; part of a subfielded field
- Subfielded Domain - subfielded field
- Subfielded Field - a field which is broken down into subfields, each containing its own data; a tuple-valued domain; also called a 0-level or zero-level field
- Tag - the formal identifier of a field or subfield, always of the form Annn, A being any letter, nnn being a three digit number eg.: X190. The last digit must be zero unless this is a subfield; if subfield, it may be 1-9
- Term - in INDEX, anything between delimiters eg.: /SORT TYPE/
 - a thesaurus descriptor
 - a fast access key extracted by term processing
- Thesaurus - a terminological control device used in translating the natural language of documents into a more constrained system language. In terms of structure, a thesaurus is a controlled and dynamic vocabulary of semantically and generically related keys which cover a specific domain of knowledge
- Tuple - a physical record in a relation
- User - anyone accessing the MINISIS system
 - within MPE, the name of a person accessing the computer, which must be supplied at log-on
- User View - a data base, seen by the user as one unit. Internally it may be a relation, projected subset, or data submodel

GLOSSARY

Utility

- a program used by the data base manager to maintain MINISIS files, eg. GARBAGE, INVERT
- in more restricted terms, any MINISIS program which does not ask for a data base name

Validate

- to ensure that data in a field is allowable, by comparing it to allowable values in an authority file. This may be done in ENTRY and MODIFY, or when inverting a file offline, or extracting keys in INDEX

Word

- within the computer, a basic unit comprising 16 bits, or two bytes
- within INDEX, word 'processing' extracts anything between blank spaces
- a key extracted by word processing

Appendix B

NOVEMBER, 1981
SERIALS IN DEVELOPMENT INFORMATION CENTERS

A./C./D. NEWSLETTER	AID PER	2	X
A.C./U.N.U. NEWSLETTER	PER	1	X
A.F.P.R.O. NEWS NOTES (ACTION FOR FOOD PRODUCTION)	PER	1	A
A.F.R./D.R. NEWS OF AFRICA	1656 NS	8	X
A.F.S. INTL/INTERCULTURAL PROGRAMS [ANN RE, ETC]	INST FILES*	5	X
A.G.R.I.N.D.E.X. (AGRIS)	PER	1	A
A.G.R.I.T.R.O.P.	PER	1	A
A.I.D. RESEARCH & DEVELOPMENT ABSTRACTS	1656 NS	8	X
A.I.D. RESOURCES REPORT	AID PER	2	X
A.I.D. RESOURCES REPORT	1656 NS	8	X
A.I.T. REVIEW	PER	1	X
A.M.T.I.D.	AID PER	2	T
A.M.T.I.D.	1656 NS	8	X
A.P.L.I.C. COMMUNICATOR	PER	1	X
A.P.O. NEWS	PER	1	X
A.S.S.E.T. (ABSTRACTS ON SELECTED SOLAR ENERGY TECH.)	PER	1	T
ABSTRACTS ON CASSAVA	OTHER	6	A
ABSTRACTS ON HYGIENE & COMMUNICABLE DISEASES	PER	1	N
ACADEMY FOR INT'L DEVELOPMENT [ANNUAL REPORTS, ETC]	INST FILES*	5	X
ACCESS	AID PER	2	X
ACCESSIONS LIST SOUTHEAST ASIA	PER	1	M
ACCION INTERNATIONAL [ANNUAL REPORTS, ETC]	INST FILES*	5	X
ACTION. ANNUAL REPORT.	INST FILE	5	X
ACTION FOR FOOD PRODUCTION [ANNUAL REPORTS, ETC]	INST FILES*	5	X
ADVANCEDATA	PER	1	X
AFRICA	PER	1	D
AFRICA - LINK	PER	1	X
AFRICA REPORT	PER	1	D
AFRICAN BIBLIOGRAPHIC CENTER [ANNUAL REPORTS, ETC]	INST FILES*	5	Z
AFRICAN DEVELOPMENT BANK, AFR DEV FUND. ANNUAL REPORT	INST FILES	5	D
AFRICAN POPULATION NEWSLETTER	PER	1	P
AFRICAN RURAL ECONOMY PROGRAM. WORKING PAPERS.	OTHER	6	D
AFRICAN-AMERICAN INSTITUTE [ANNUAL REPORTS, ETC]	INST FILES*	5	X
AFRICAN-AMERICAN LABOR CENTER [ANNUAL REPORTS, ETC]	INST FILES*	5	D
AFRICAN-AMERICAN SCHOLARS COUNCIL, INC. [ANN RE, ETC]	INST FILES*	5	X
AFRICARE [ANNUAL REPORTS, ECT]	INST FILES*	5	X
AGENDA	AID PER	2	D
AGENDA	1656 NS	8	X
AGRICULTURAL AND INDUSTRIAL DEVELOPMENT [ANN RE, ETC]	INST FILES*	5	D
AGRICULTURAL COOPERATIVE DEVE INTL [ANN RE, ETC]	INST FILES*	5	A
AGRICULTURAL DEVELOPMENT AGEN IN BANGLA [ANN RE, ETC]	INST FILES*	5	A
AGRICULTURAL DEVELOPMENT COUNCIL, INC. ANNUAL REPORT.	INST FILES	5	A
AGRICULTURAL INFORMATION & DOCUMENTATION SYSTEMS - FAO	PER	1	A

Appendix B

AGRICULTURAL LIBRARIES INFORMATION NOTES	PER	1	L
AGRICULTURAL RESEARCH INSTITUTE [ANNUAL REPORTS, ETC]	INST FILES*	5	A
AGRO-FORESTRY	PER	1	A
AGRONOMY ABSTRACTS. ANNUAL MEETINGS.	PER	1	A
AGRONOMY JOURNAL	PER	1	A
AMERICA-MIDEAST EDUC & TRAIN SERV, INC. [ANN RE, ETC]	INST FILES*	5	J
AMERICAN COUN ON EDUC, OVERSEAS LIAS COM [ANN RE, ETC]	INST FILES*	5	J
AMERICAN ECONOMIC REVIEW	PER	1	D
AMERICAN HOME ECONOMICS ASSOCIATION. ANNUAL REPORT.	SERIAL SHELF	4	A
AMERICAN HOME ECONOMICS ASSOC. SEMI-ANNUAL REPORT.	SERIAL SHELF	4	A
AMERICAN HOME ECONOMICS ASSOCIATION [ANNUAL REP, ETC]	INST FILES*	5	A
AMERICAN INSTITUTE FOR FREE LABOR DEVE [ANN RE, ETC]	INST FILES*	5	D
AMERICAN JOURNAL OF AGRICULTURAL ECONOMICS	PER	1	A
AMERICAN JOURNAL OF CLINICAL NUTRITION	PER	1	N
AMERICAN JOURNAL OF OBSTETRICS & GYNECOLOGY	PER	1	N
AMERICAN JOURNAL OF PUBLIC HEALTH	PER	1	N
AMERICAN JOURNAL OF TROPICAL MEDICINE & HYGIENE	PER	1	N
AMERICAN PUBLIC HEALTH ASSOCIATION [ANNUAL REP, ETC]	INST FILES*	5	N
AMERICAN UNIVERSITIES FIELD STAFF [ANNUAL REPORT, ETC]	INST FILES*	5	X
AMERICAN UNIVERSITIES FIELD STAFF REPORTS	PER	1	X
AMERICAN WATER WORKS ASSOCIATION	PER	1	X
AMSTERDAM-ROTTERDAM BANK NV (AMROBANK). ANNUAL REPORT	INST FILES	5	D
ANNALS OF TROPICAL MEDICINE AND PARASITOLOGY	PER	1	N
ANNOTATED BIBLIOGRAPHY (INTERDIS COMM PROG SMITH INST)	AID PER	2	Z
APPROPRIATE TECHNOLOGY	PER	1	T
ARID LAND ABSTRACTS	PER	1	A
ARID LAND PLANT RESOURCES	PER	1	A
ARID LANDS NEWSLETTER	AID PER	2	A
ARROZ DEL CIAT PARA AMERICA LATINA	AID PER	2	X
ASIA FOUNDATION [ANNUAL REPORTS, ETC]	INST FILES*	5	X
ASIA RESEARCH BULLETIN	PER	1	X
ASIAN AND PACIFIC CENSUS FORUM	AID PER	2	P
ASIAN AQUACULTURE	PER	1	A
ASIAN AQUACULTURE	1656 NS	8	X
ASIAN FOUNDATION. ANNUAL REPORT.	INST FILES	5	D
ASIAN INSTITUTE OF TECHNOLOGY. ANNUAL REPORT.	INST FILES	5	T
ASIAN MASS COMMUNICATION BULLETIN	PER	1	C
ASIAN POPULATION STUDIES SERIES	OTHER	6	P
ASIAN PRODUCTIVITY ORGANIZATION. ANNUAL REPORT.	INST FILES	5	X
ASIAN VEGETABLE RESEARCH & DEV. CENTER. ANNUAL REPORT	INST FILES	5	A
ASIAN-AMERICAN FREE LABOR INSTITUTE [ANN RE, ETC]	INST FILES*	5	D
ASIAN-PACIFIC POPULATION PROGRAMME NEWS	PER	1	P
ASSOCIATION OF COMM HEALTH SER IN GUATE [ANN RE, ETC]	INST FILES*	5	N
ASSOCIATION OF VOL AGENCIES FOR RUR DEVE [ANN RE, ETC]	INST FILES*	5	D
AT I.C.I.S.A.T.	AID PER	2	A
AU COURANT	PER	1	D
AUSTRALIAN COUNCIL FOR OVERSEAS AID [ANN RE, ETC]	INST FILES*	5	X
AVIATION WEEK AND SPACE TECHNOLOGY	PER	1	T
AWARENESS LIST - INTER. EDUCATIONAL REPORTING SERVICE	PER	1	J
B.E.R.D.'S EYEVUEW	AID PER	2	X
B.I.F.A.D. BRIEFS	AID PER	2	A
B.I.F.A.D. BRIEFS	1656 NS	8	X
B.I.O.P. NEWSLETTER	PER	1	X

Appendix B

B.I.O.T.R.O.P. NEWSLETTER	AID PER	2	N
B.I.O.T.R.O.P. [ANNUAL REPORTS, ECT]	INST FILES*	5	X
B.I.O.T.R.O.P.: S.E.A.M.E.O. REG CEN FOR TROP BIO. AR.	INST FILES	5	N
B.N.F. BULLETIN	AID PER	2	X
B.O.S.T.I.D. DEVELOPMENT	AID PER	2	T
BANK NOTES	PER	1	D
BANQUE DE DEVELOP DE LA REP DU NIGER [ANN RE, ETC]	INST FILES*	5	D
BANQUE DE DEVELOPPEMENT REP DU NIGER. 1 VOL SUMMARY.	INST FILES	5	D
BASICS	PER	1	X
BATTELLE MEMORIAL INSTITUTE [ANNUAL REPORTS, ETC]	INST FILES*	5	X
BENCHMARK SOILS PROJECT	AID PER	2	A
BETTER COMMUNICATION	PER	1	C
BIBLIOGRAPHY OF FAMILY PLANNING & POPULATION	PER	1	Z
BIBLIOGRAPHY OF REPRODUCTION	PER	1	Z
BOLETIN DE LA OFICINA SANITARIA PANAMERICANA	PER	1	N
BRIEFING	PER	1	X
BRITISH MEDICAL BULLETIN	PER	1	N
BRITISH MEDICAL JOURNAL	PER	1	N
BROOKINGS	PER	1	D
BULETIN KELUARGO	PER	1	X
BULLETIN D' INFORMATION	PER	1	X
BULLETIN OF INDONESIAN ECONOMIC STUDIES	PER	1	D
BULLETIN OF THE PAN AMERICAN HEALTH ORGANIZATION	PER	1	N
BULLETIN OF THE WORLD HEALTH ORGANIZATION	PER	1	N
BUREAU NAT DE L'INFOR SCIENTIF ET TECH [ANN RE, ETC]	INST FILES*	5	T
C.A.S.T. - COUNCIL FOR AGRI. SCIENCES & TECH. REPORTS	PER	1	A
C.D.C. - VETERINARY PUBLIC HEALTH NOTES	PER	1	A
C.D.C. NEWSLETTER	1656 NS	8	X
C.E.M.A.S. BULLETIN	PER	1	X
C.E.N.D.H.R.R.A. NETWORK NEWSLETTER	PER	1	X
C.I.A.T.	NOS	7	X
C.I.M.M.Y.T. TODAY	AID PER	2	A
C.I.P. CIRCULAR	AID PER	2	A
C.L.F.P./CURRENT LITERATURE IN FAMILY PLANNING	OTHER	6	P
C.O.D.E.L. NEWS	PER	1	X
C.R.D.	PER	1	X
C.S.T. NEWSLETTER	AID PER	2	X
CAJANUS	PER	1	X
CANADIAN COUNCIL FOR INTERNATIONAL COOPER [AN RE, ETC]	INST FILES*	5	X
CANADIAN INTERNATIONAL DEVELOPMENT ORGAN. ANNUAL REP.	INST FILES	5	D
CARE, INC. [ANNUAL REPORTS, ETC]	INST FILES*	5	X
CARNEGIE CORPORATION OF NEW YORK. ANNUAL REPORT.	INST FILES	5	D
CAROLINA POPULATION CENTER. MONOGRAPH.	SERIAL SHELF	4	P
CARRIBBEAN DEVELOPMENT BANK [ANNUAL REPORTS, ETC]	INST FILES*	5	D
CASSAVA NEWSLETTER	AID PER	2	A
CENTER FOR FAMILY PLANNING PROGRAM DEVE [ANN RE, ETC]	INST FILES*	5	P
CENTER FOR POPULATION STUDIES. WORKING PAPERS.	OTHER	6	P
CENTERLINES	AID PER	2	X
CENTERPOINT	AID PER	2	X
CENTRAL FAM PL INST, N.D., INDIA. CFPI MANUAL SERIES.	SERIAL SHELF	4	P
CENTRAL FAM PL INST, N.D., INDIA. CFPI MONOGRAPH SER.	SERIAL SHELF	4	P
CENTRAL FAM PL INST, N.D., INDIA. CFPI REPORT SERIES.	SERIAL SHELF	4	P
CENTRAL FAM PL INST, N.D., INDIA. CFPI TECH PAPER.	SERIAL SHELF	4	P

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CENTRAL FAM PL INST, N.D., INDIA. CFPI TRAINING AID.	SERIAL SHELF	4	P
CENTRO INTERNACIONAL DE AGRICULTURA TROP [ANN RE, ETC]	INST FILES*	5	A
CERES (FAO)	1656 NS	8	A
CERES, F.A.O. REVIEW	PER	1	A
CHEMICAL AND ENGINEERING NEWS	PER	1	T
CHEMICAL ENGINEERING	PER	1	T
CHEMTECH	PER	1	T
CHILDREN IN THE TROPICS	PER	1	X
CHINESE CENTER FOR INTL TRAIN IN FAM PL [ANN RE, ETC]	INST FILES*	5	P
CHRISTIAN ACTION FOR DEV IN CARIBBEAN [ANN RE, ECT]	INST FILES*	5	D
CHRISTIAN MEDICAL COMMISSION [ANNUAL REPORTS, ETC]	INST FILES*	5	N
CHRISTIAN RELIEF & DEVELOPMENT ASSOC [ANN RE, ECT]	INST FILES*	5	D
CIBA FOUNDATION [ANNUAL REPORTS, ECT]	INST FILES*	5	X
CIVIL ENGINEERING	PER	1	T
CLARK (EDNA MCCONNELL) FOUNDATION. ANNUAL REPORT.	INST FILES	5	X
COASTAL ZONE MANAGEMENT	PER	1	A
COCOA RESEARCH INSTITUTE [ANNUAL REPORT, ECT]	INST FILES*	5	A
COCOMMUNITY	PER	1	A
COLOMBIAN FED OF NON-PROFIT FOUND & INST [ANN RE, ETC]	INST FILES*	5	X
COLOMBO PLAN NEWSLETTER	PER	1	D
COLOMBO PLAN. ANNUAL REPORT.	INST FILES*	5	X
COMMITTEE ON FAMILY PLANNING. ANNUAL REPORT.	INST FILES*	5	P
COMMUNICATION NEWS	PER	1	C
COMMUNIQUE ON DEVELOPMENT ISSUES	PER	1	D
COMMUNITY & FAM STUDY CEN, UN OF CHI. FAM PL RESEARCH	SERIAL SHELF	4	P
COMMUNITY SYSTEMS FOUNDATION. ANNUAL REPORT.	INST FILES*	5	X
COMPARATIVE EDUCATION REVIEW	NOS	7	J
CONGRESSIONAL QUARTERLY WEEKLY REPORT	PER	1	S
CONSORTIUM FOR INTERNATIONAL DEVELOPMENT [ANN RE, ECT]	INST FILES*	5	D
CONSORTIUM ON PEACE RESEARCH EDUCATION [ANN RE, ECT]	INST FILES*	5	J
CONSTRUCTION	PER	1	L
CONSTRUCTION CONTRACTING	PER	1	L
CONSULTATIVE GROUP ON INT AGR RESEARCH. DESCR OF WORK	INST FILES	5	A
CONSULTATIVE GROUP ON INTL AGR RESEARCH [ANN RE, ETC]	INST FILES*	5	A
CONSULTING ENGINEER	PER	1	T
CONTACT	NOS	7	X
CONTRACEPTION	PER	1	P
CONTRACTING AND CONSTRUCTION ENGINEERING	PER	1	L
COOPERATIVE LEAGUE OF THE USA [ANNUAL REPORT, ETC]	INST FILES*	5	X
COORDINATION IN DEVELOPMENT, INC [ANNUAL REPORT, ETC]	INST FILES*	5	D
COUNCIL OF INTL PROG FOR YOUTH LEADERS [ANN RE, ETC]	INST FILES*	5	X
COUNCIL OF VOLUNTARY SOCIAL SERVICES [ANN RE, ETC]	INST FILES*	5	X
COUNTRY DEMOGRAPHIC PROFILES	AID PER	2	P
COUNTRY PROFILES	PER	1	X
CREDIT UNION NATIONAL ASS, INC. [ANNUAL REPORT, ETC]	INST FILES*	5	X
CROP SCIENCE	PER	1	A
CURRENT BIBLIOGRAPHY OF EPIDEMIOLOGY	PER	1	Z
CURRENT CONTENTS - AGRI. BIOLOGY & ENVIRONMENTAL SCI.	PER	1	A
CURRENT CONTENTS - CLINICAL PRACTICE	PER	1	N
CURRENT CONTENTS - ENGINEERING, TECH & APPLIED SCI.	PER	1	T
CURRENT CONTENTS - LIFE SCIENCES	PER	1	T
CURRENT CONTENTS - PHYSICAL, CHEM. & EARTH SCIENCES	PER	1	T
CURRENT CONTENTS - SOCIAL AND BEHAVIORAL SCIENCES	PER	1	S
CURRENT POPULATION REPORTS	PER	1	P
CURRENT PUBLICATIONS IN POPULATION/FAMILY PLANNING	PER	1	P

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D. + C. DEVELOPMENT AND COOPERATION	PER	1	D
D.D.R. (DECENTRALIZATION & DEVELOPMENT REVIEW)	AID PER	2	D
D.P.M.C. UPDATE	AID PER	2	X
DAEDALUS	PER	1	X
DATA ASIA FOR DECISION	PER	1	X
DATA FOR DECISION	PER	1	X
DEMOGRAPHIC TRAINING & RESEARCH CENTRE [ANN RE, ETC]	INST FILES*	5	P
DEMOGRAPHY	PER	1	P
DEMOGRAPHY INDIA	PER	1	P
DEPARTMENT OF STATE BULLETIN	1656 NS	8	X
DEVELOPMENT - DEVELOPPEMENT - DESARROLLO	PER	1	D
DEVELOPMENT COMMUNICATION REPORT	AID PER	2	C
DEVELOPMENT DIALOGUE	PER	1	D
DEVELOPMENT DIGEST	AID PER	2	D
DEVELOPMENT DIGEST	1656 NS	8	D
DEVELOPMENT DIRECTIONS	PER	1	D
DEVELOPMENT FORUM	PER	1	D
DEVELOPMENT IN ACTION	PER	1	D
DEVELOPMENT NEWSLETTER	PER	1	D
DEVINDEX	PER	1	M
DIARRHOEA DIALOGUE	PER	1	N
DICUSSION PAPER (IDS)	PER	1	D
DIRECT RELIEF FOUNDATION [ANNUAL REPORT, ETC]	INST FILES*	5	X
DIRECTION OF TRADE	PER	1	D
DIRECTORATE FOR ENGINEERING & APP SCIEN [ANN RE, ECT]	INST FILES*	5	T
DRAPER WORLD POPULATION FUND REPORT	SERIAL SHELF	4	P
DRUG RESEARCH REPORT, THE BLUE SHEET	OTHER	6	N
E. + Z. ENTWICKLUNG UND ZUSAMMENARBEIT	PER	1	D
E.P.A. - I.R.C. BULLETIN	1656 NS	8	X
EARTHSCAN REPORT	PER	1	X
EAST-WEST CENTER [ANNUAL REPORT, ETC]	INST FILES*	5	X
EAST-WEST COMMUNICATION INSTITUTE. CASE STUDY.	SERIAL SHELF	4	C
EAST-WEST COMMUNICATION INSTITUTE. PAPER.	SERIAL SHELF	4	C
EAST-WEST COMMUNICATION INST. PROF DEVELOPMENT MODULE	SERIAL SHELF	4	C
EAST-WEST COMMUNICATION NEWSLETTER	PER	1	C
EAST-WEST PERSPECTIVES	PER	1	X
EAST-WEST POPULATION INSTITUTE. PAPER.	SERIAL SHELF	4	P
EAST-WEST POPULATION INSTITUTE. REPRINT.	SERIAL SHELF	4	P
ECODEVELOPMENT NEWS	PER	1	D
ECONOMIC DEVELOPMENT AND CULTURAL CHANGE	PER	1	D
ECONOMIST, THE	PER	1	D
EDUCATION DEVELOPMENT CENTER [ANNUAL REPORT, ETC]	INST FILES*	5	J
ELECTRICAL WORLD	PER	1	T
ENDOCRINOLOGY	PER	1	N
ENERGY - THE INTERNATIONAL JOURNAL	PER	1	T
ENERGY CONSERVATION/EDUCATION FACT SHEET	1656 NS	8	X
ENERGY DAILY	PER	1	T
ENERGY ECONOMICS	PER	1	D
ENERGY INSIDER	1656 NS	8	X
ENERGY POLICY	PER	1	X
ENGINEERING & MINING JOURNAL	PER	1	T

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ENGINEERING NEWSLETTER	AID PER	2	T
ENTWICKLUNG DEVELOPMENT	PER	1	D
ENTWICKLUNG LANDLICHER RAUM	PER	1	D
ENVIRONMENTAL CONSERVATION	PER	1	X
ENVIRONMENTAL POLICY AND LAW	PER	1	X
ENVIRONMENTAL SCIENCE AND TECHNOLOGY	PER	1	T
EQUIPMENT GUIDE NEWS	PER	1	X
EUROPEAN COMMUNITY NEWS	PER	1	X
EXCERPTA MEDICA - OBSTETRICS AND GYNECOLOGY	PER	1	N
EXCERPTA MEDICA - PUBLIC HEALTH, SOCIAL MED. & HYGIENE	PER	1	N
EXECUTIVE (CANADA)	PER	1	X
EXPERIMENT IN INTL LIVING [ANNUAL REPORT, ETC]	INST FILES*	5	X

F.A.O. AGRICULTURAL COMMODITY PROJECTIONS.	FAO DOC	3	A
F.A.O. AGRICULTURAL SERVICES BULLETIN.	FAO DOC	3	A
F.A.O. ANIMAL HEALTH YEARBOOK.	FAO DOC	3	X
F.A.O. AT WORK	PER	1	A
F.A.O. ECONOMIC AND SOCIAL DEVELOPMENT PAPERS	FAO DOC	3	A
F.A.O. FERTILIZER YEARBOOK.	FAO DOC	3	A
F.A.O. FISHERIES CIRCULARS	FAO DOC	3	A
F.A.O. FISHERIES TECHNICAL PAPERS	FAO DOC	3	A
F.A.O. FOOD & AGRICULTURE LEGISLATION.	FAO DOC	3	A
F.A.O. MONTHLY BULLETIN OF STATISTICS	PER	1	A
F.A.O. PLANT GENETIC RESOURCES NEWSLETTER.	FAO DOC	3	X
F.A.O. PLANT PRODUCTION BULLETIN	PER	1	A
F.A.O. PRODUCTION YEARBOOK.	FAO DOC	3	A
F.A.O. STATE OF FOOD & AGRICULTURE.	FAO DOC	3	A
F.A.O. YEARBOOK OF FISHERIES STATISTICS.	FAO DOC	3	A
F.A.O. YEARBOOK OF FOREST PRODUCTS.	FAO DOC	3	A
F.D.C. REPORTS, THE PINK SHEET	NOS	7	N
F.I.D./C.A.O. NEWSLETTER	PER	1	X
FAMILY LIFE AND POPULATION PROGRAM BRIEFS	NOS	7	P
FAMILY PLANNING ASS OF HONG KONG [ANNUAL REPORT, ETC]	INST FILES*	5	P
FAMILY PLANNING ASS OF KENYA [ANNUAL REPORT, ETC]	INST FILES*	5	P
FAMILY PLANNING ASS OF PAKISTAN [ANNUAL REPORT, ETC]	INST FILES*	5	P
FAMILY PLANNING FOUNDATION . ANNUAL REPORT	INST FILES	5	P
FAMILY PLANNING INTL ASSISTANCE [ANNUAL REPORT, ETC]	INST FILES*	5	P
FAMILY PLANNING ORGAN OF THE PHILIPPINES [ANN RE, ETC]	INST FILES*	5	P
FAMILY PLANNING PERSPECTIVES	PER	1	P
FAMILY PLANNING RESUME	AID PER	2	P
FAMILY PLANNING/POPULATION REPORTER	PER	1	P
FAR EASTERN ECONOMIC REVIEW	PER	1	D
FARM CREDIT ADMIN; THE COOP FARM CRED SYSTEM. ANN REP	INST FILES	5	D
FEDERAL LIBRARY COMMITTEE NEWSLETTER	OTHER	6	M
FEEDSTUFFS	PER	1	A
FERTILITY AND STERILITY	PER	1	P
FERTILIZER ABSTRACTS	AID PER	2	A
FINANCE AND DEVELOPMENT	PER	1	D
FOCUS	AID PER	2	X
FOOD AND AGRI ORGAN OF THE U.S. [ANNUAL REPORT, ETC]	INST FILES*	5	A
FOOD AND NUTRITION (F.A.O.)	PER	1	N
FOOD AND NUTRITION BULLETIN	PER	1	N
FOOD MONITOR	PER	1	A
FORD FOUNDATION LETTER	PER	1	X

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FORD FOUNDATION [ANNUAL REPORT, ETC]	INST FILES*	5	X
FOREIGN AFFAIRS	PER	1	S
FOREIGN AGRICULTURE	PER	1	A
FORESTRY RESEARCH INSTIT. OF NIGERIA. ANNUAL REPORT	INST FILES	5	A
FORUM	PER	1	X
FORUM, NATIONAL CLEARINGHOUSE FOR BILINGUAL EDUCATION	PER	1	J
FOUNDATION FOR THE PEOPLES OF THE SO PAC [ANN RE, ETC]	INST FILES*	5	X
FRESHWATER & AQUACULTURE CONTENTS TABLE (F.A.O.)	PER	1	A
FRONT LINES	1656 NS	8	X
FUTURE	PER	1	X
FUTURE TIMES	PER	1	X
FUTURIST	PER	1	S
G.A.S.G.A. - GROUP FOR ASS. ON STOR. OF GRAINS IN AFR	PER	1	A
GAS TURBINE WORLD	PER	1	T
GAZETTE	PER	1	X
GLIMPSE	PER	1	X
GOVERNMENT EXECUTIVE	PER	1	S
GOVERNMENT SPONSERED RESEARCH ON FOREIGN AFFAIRS	1656 NS	8	X
GOVERNMENT SPONSORED RESEARCH ON FOREIGN AFFAIRS	PER	1	S
GUTTMACHER (ALAN) INSTITUTE [ANNUAL REPORT, ETC]	INST FILES*	5	X
HABITAT INTERNATIONAL	PER	1	L
HIGHER EDUCATION	PER	1	J
HOJAS DE FRIJOL PARA AMERICA LATINA	AID PER	2	X
HONG KONG COUNCIL OF SOC SERVICE (HKCSS) [ANN RE, ETC]	INST FILES*	5	X
HUMAN ORGANIZATION	PER	1	X
HUNGER NOTES	PER	1	A
I.A.D.S. NEWSLETTER & OCCASIONAL PAPER	PER	1	X
I.A.P.A.R. CIRCULAR	NOS	7	X
I.C.A. COMMUNICAE	AID PER	2	X
I.C.A.R.D.A.	PER	1	X
I.C.A.R.P. BULLETIN	AID PER	2	X
I.C.A.S.A.L.S. NEWSLETTER	AID PER	2	A
I.C.I.D. NEWSLETTER	NOS	7	X
I.C.L.A.R.M. NEWSLETTER	AID PER	2	X
I.C.S.S.R. NEWSLETTER	PER	1	X
I.D.B. NEWS	PER	1	D
I.D.R.C. (NO. --)	OTHER	6	D
I.D.R.C. REPORTS	PER	1	D
I.D.S. BULLETIN	PER	1	D
I.D.S. BULLETIN	1656 NS	8	X
I.E.C. IN POPULATION - COUNTRY PROGRAMS	PER	1	P
I.E.C. IN POPULATION - INTERNATIONAL ASSISTANCE	PER	1	P
I.E.C. NEWSLETTER	PER	1	X
I.F.D.C. REPORT	AID PER	2	X
I.F.P.R.I. ABSTRACT	PER	1	X
I.F.P.R.I. REPORT	PER	1	A
I.G.C.C. NEWS	PER	1	A
I.I.C.A. IN THE AMERICAS	AID PER	2	X
I.I.T.A. LETTER	PER	1	X

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I.I.T.A. RESEARCH BRIEFS	AID PER	2	X
I.L.C.A. BULLETIN	AID PER	2	X
I.L.O. INFORMATION	PER	1	X
I.M.F. SURVEY	PER	1	D
I.N.S.T.O.Y. (INTERNATIONAL SOYBEAN PROGRAM)	AID PER	2	A
I.P.A.V.S. NEWSLETTER	AID PER	2	X
I.P.P.C. PAPER	AID PER	2	X
I.P.P.F. CO-OPERATIVE INFORMATION SERVICE	PER	1	P
I.P.P.F. LIBRARY BULLETIN	PER	1	P
I.P.P.F. MEDICAL BULLETIN	PER	1	P
I.P.P.F. NEWS	PER	1	P
I.P.P.F. OPEN FILE	PER	1	P
I.P.P.F. W.H.R. NEWSLETTER	PER	1	P
I.R.R.I. REPORTER	AID PER	2	A
I.R.R.I. RESEARCH PAPER SERIES	AID PER	2	A
I.R.R.I.C.A.B. - CURRENT ANNOTATED BIB. OF IRRIGATION	PER	1	Z
I.R.R.I.N.E.W.S.	PER	1	A
IMPACT	PER	1	X
INDUSTRY AND DEVELOPMENT	PER	1	D
INDUSTRY STUDIES	NOS	7	X
INFOLETTER	AID PER	2	X
INFORMATION TIMES	NOS	7	X
INFOTECH	NOS	7	X
INITIATIVES IN POPULATION	PER	1	P
INNOTECH GOVERNING BOARD MEETING. FINAL REPORT.	INST FILES	5	X
INNOTECH JOURNAL	AID PER	2	X
INNOTECH NEWSLETTER	AID PER	2	X
INNOVATION	PER	1	X
INSTITUT AFRICAIN POUR DEVE ECONO ET SOC [ANN RE, ETC]	INST FILES*	5	D
INSTITUTE FOR INTL DEVELOPMENT [ANNUAL REPORT, ETC]	INST FILES*	5	D
INSTITUTE OF AGRIC RESEARCH [ANNUAL REPORT, ETC]	INST FILES*	5	A
INSTITUTE OF DEVELOPING ECONOMICS. ANNUAL REPORT.	INST FILES	5	D
INSTITUTE OF DEVELOPMENT STUDIES. ANNUAL REPORT.	INST FILES	5	D
INSTITUTE OF INTERNATIONAL EDUC [ANNUAL REPORT, ETC]	INST FILES*	5	J
INSTITUTO DE PESQUISAS DA MARINHA	NOS	7	X
INSTRUCTIONAL TECHNOLOGY REPORT	AID PER	2	T
INTER-AMERICAN DEV BANK, EC & SOC PRO IN L AM. ANN RE	INST FILES	5	D
INTER-AMERICAN DEVELOPMENT BANK. ANNUAL REPORT.	INST FILES	5	D
INTER-AMERICAN FOUNDATION. ANNUAL REPORT	INST FILES	5	X
INTER-AMERICAN INST OF AGR SCIEN [ANNUAL REPORT, ETC]	INST FILES*	5	A
INTERCHANGE	PER	1	P
INTERCIENCIA	PER	1	X
INTERCOM	PER	1	J
INTERCOM	AID PER	2	P
INTERDEPENDENT, THE	PER	1	X
INTERECONOMICS	PER	1	D
INTERMEDIATE TECHNOLOGY DEVE GROUP, LTD [ANN RE, ETC]	INST FILES*	5	T
INTL (FAMILY PLANNING INTER. ASSISTANCE)	AID PER	2	P
INTL AGRICULTURAL DEVE SERVICE [ANNUAL REPORT, ETC]	INST FILES*	5	A
INTL AGRICULTURAL DEVE SERVICE. REPORT.	INST FILES	5	A
INTL BANK FOR RECONST & DEVE [ANNUAL REPORT, ETC]	INST FILES*	5	D
INTL BOARD FOR PLANT GENET RES [ANNUAL REPORT, ETC]	INST FILES*	5	A
INTL BULLETIN	AID PER	2	X
INTL CENTER FOR AGR RES IN DRY AREAS [ANN RE, ETC]	INST FILES*	5	A
INTL CENTER FOR AQUACULTURE [ANNUAL REPORT, ETC]	INST FILES*	5	X

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INTL CENTER FOR RESEARCH ON WOMEN [ANNUAL REPORT, ECT]	INST FILES*	5	X
INTL CENTER FOR TROPICAL AGRI (CIAT) [ANN RE, ETC]	INST FILES*	5	A
INTL CHEMICAL ENGINEERING	PER	1	T
INTL CONFERENCES RELATED TO PEST MANAGEMENT	NOS	7	P
INTL COOPERATOR'S GUIDES	AID PER	2	X
INTL COUNCIL FOR EDUC DEVELOPMENT (ICED) [ANN RE, ETC]	INST FILES*	5	J
INTL COUNCIL OF VOLUNTARY AGENCIES [ANN RE, ECT]	INST FILES*	5	X
INTL CROPS RES INST FOR SEMI-ARID TROPIC [ANN RE, ETC]	INST FILES*	5	A
INTL CROPS RES INST FOR SEMI-ARID TROP. RESEARCH BULL	OTHER	6	A
INTL DEVELOPMENT RESEARCH CENTER. PROJECTS.	INST FILES	5	D
INTL DEVELOPMENT RESEARCH CENTER. SEARCHING: REVIEW	INST FILES	5	D
INTL DEVELOPMENT RESEARCH CENTER (IDRC) [ANN RE, ETC]	INST FILES*	5	D
INTL DEVELOPMENT REVIEW	PER	1	D
INTL DIGEST OF HEALTH LEGISLATION	PER	1	N
INTL EDUCATIONAL DEVELOPMENT, INC [ANNUAL REPORT, ETC]	INST FILES*	5	J
INTL FAMILY PLANNING DIGEST	NOS	7	P
INTL FAMILY PLANNING PERSPECTIVE & DIGEST	AID PER	2	P
INTL FEEDSTUFFS INSTITUTE [ANNUAL REPORT, ETC]	INST FILES*	5	A
INTL FERTILITY RESEARCH PROGRAM [ANNUAL REPORT, ETC]	INST FILES*	5	P
INTL FERTILIZER DEVELOPMENT CTR [ANNUAL REPORT, ETC]	INST FILES*	5	A
INTL FINANCE CORPORATION [ANNUAL REPORT, ETC]	INST FILES*	5	D
INTL FINANCIAL STATISTICS	PER	1	D
INTL FOOD POLICY RESEARCH INSTITUTE. RESEARCH REPORT.	OTHER	6	A
INTL FOOD POLICY RESEARCH INST (IFPRI) [ANN RE, ETC]	INST FILES*	5	X
INTL HUMAN ASSISTANCE PROGRAMS [ANNUAL REPORT, ETC]	INST FILES*	5	X
INTL INST FOR EDUC PLANNING (IIEP) [ANN RE, ETC]	INST FILES*	5	J
INTL INST FOR ENVIRONMENT & DEVE (IIED) [ANN RE, ETC]	INST FILES*	5	X
INTL INST OF RURAL RECONSTRUCTION [ANNUAL REPORT, ETC]	INST FILES*	5	X
INTL INST OF TROPICAL AGRIC [ANNUAL REPORT, ETC]	INST FILES*	5	A
INTL INST OF TROPICAL AGRIC. RESEARCH HIGHLIGHTS.	INST FILES	5	A
INTL JOURNAL OF GYNAECOLOGY AND OBSTETRICS	PER	1	N
INTL JOURNAL OF HEALTH SERVICES	PER	1	N
INTL LABOR DOCUMENTATION	PER	1	D
INTL LIVESTOCK CENTRE OF AFRICA [ANNUAL REPORT, ETC]	INST FILES*	5	X
INTL MAIZE & WHEAT IMPROV CTR (CIMMYT) [ANN RE, ETC]	INST FILES*	5	A
INTL MOLDERS & ALLIED WORKERS UNION JOURNAL	NOS	7	D
INTL MONETARY FUND [ANNUAL REPORT, ETC]	INST FILES*	5	D
INTL PLANNED PARENT. FED./W.H.R. NEWS SERVICE	PER	1	P
INTL PLANNED PARENTHOOD FED. IPPF IN ACTION.	INST FILES	5	P
INTL PLANNED PARENTHOOD FED (IPPF) [ANN RE, ETC]	INST FILES*	5	P
INTL POTATO CENTER (CID) [ANNUAL REPORT, ETC]	INST FILES*	5	A
INTL POWER GENERATION	PER	1	T
INTL PROG OF LAB FOR POP STAT. SCI REP SER.	SERIAL SHELF	4	P
INTL PROGRAMS NEWSLETTER - UNIV OF MINNESOTA	AID PER	2	X
INTL PROJECT NEWSLETTER - SPECIAL ISSUE	NOS	7	X
INTL RESEARCH PANEL ON EDUC'L FIN, COST & EFF - NEWSL	NOS	7	J
INTL REVIEW	AID PER	2	X
INTL RICE RESEARCH INSTITUTE NEWSLETTER	AID PER	2	A
INTL RICE RESEARCH INSTITUTE. ANNUAL REPORT	INST FILES	5	A
INTL RICE RESEARCH INSTITUTE. RESEARCH HIGH.	INST FILES	5	A
INTL RICE RESEARCH INSTITUTE [ANNUAL REPORT, ETC]	INST FILES*	5	A
INTL STATISTICAL INSTITUTE [ANNUAL REPORT, ETC]	INST FILES*	5	X
INTL TREE CROPS JOURNAL	PER	1	A
INTL VOLUNTARY SERVICES, INC [ANNUAL REPORT, ETC]	INST FILES*	5	X
INTL WOMEN'S TRIBUNE CENTRE NEWSLETTER	NOS	7	S

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INVENTORY & ANALYSIS OF FEDERAL POPULATION RESEARCH	PER	1	P
IRRIGATION JOURNAL	PER	1	A
JOHNSON (ROBERT WOOD) FOUNDATION [ANNUAL REPORT, ETC]	INST FILES*	5	X
JOURNAL OF AGRICULTURAL ECONOMICS & DEVELOPMENT	NOS	7	A
JOURNAL OF COMMUNICATION	PER	1	C
JOURNAL OF DEVELOPMENT ECONOMICS	PER	1	D
JOURNAL OF DEVELOPMENT STUDIES	PER	1	D
JOURNAL OF ECONOMIC LITERATURE	PER	1	D
JOURNAL OF FERROCEMENT	PER	1	T
JOURNAL OF HUMAN SERVICES ABSTRACTS	PER	1	X
JOURNAL OF MEDICAL EDUCATION	PER	1	N
JOURNAL OF REPRODUCTION AND FERTILITY	PER	1	P
JOURNAL OF THE AMERICAN DIETETIC ASSOCIATION	PER	1	N
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION	PER	1	N
JOURNAL OF THE ENVIRONMENTAL ENGINEERING DIVISION	PER	1	T
JOURNAL OF THE INTER-AMERICAN FOUNDATION	PER	1	X
JOURNAL OF THE ROYAL SOCIETY OF MEDICINE	PER	1	N
JOURNAL OF WATER POLLUTION CONTROL FEDERATION	PER	1	A
KELLER, (HELLEN) INTL, INC [ANNUAL REPORT, ETC]	INST FILES*	5	X
KELLOG (W.K.) FOUNDATION [ANNUAL REPORT, ETC]	INST FILES*	5	X
KIPLINGER AGRICULTURAL LETTER	PER	1	A
KOREA ASSOC OF VOLUNTARY AGENCIES (KAVA) [ANN RE, ETC]	INST FILES*	5	X
KOREA INSTITUTE OF SCIENCE & TECH [ANNUAL REPORT, ETC]	INST FILES*	5	T
L'EDUCATION NOUVELLE	PER	1	J
L.A.C. NOTES	1656 NS	8	X
L.E.C. NEWSLETTER	AID PER	2	X
L.E.C. REPORT PUBLICATIONS	OTHER	6	X
L.J./S.L.J. HOTLINE	PER	1	M
LANCET	PER	1	N
LAND REFORM (F.A.O.)	FAO DOC	3	A
LAND TENURE CENTER ACCESSION LIST	AID PER	2	A
LAND TENURE CENTER NEWSLETTER	AID PER	2	A
LATIN AMERICAN AGRIBUSINESS DEVE CORPOR [ANN RE, ETC]	INST FILES*	5	A
LATIN AMERICAN CONFED OF CRED & SAV COOP [ANN RE, ETC]	INST FILES*	5	D
LATIN AMERICAN ENERGY REPORT	PER	1	T
LAW AND POPULATION MONOGRAPH SERIES	SERIAL SHELF	4	P
LEAGUE FOR INTERNATIONAL FOOD EDUCATION	AID PER	2	A
LIBRARIES IN INTERNATIONAL DEVELOPMENT	PER	1	M
LIBRARY JOURNAL	PER	1	M
LINK, THE	AID PER	2	X
LOOKING AHEAD	NOS	7	X
LUCE (HENRY) FOUNDATION, INC [ANNUAL REPORT, ETC]	INST FILES*	5	X
LUND LETTER ON SCIENCE, TECHNOLOGY & BASIC HUMAN NEEDS	PER	1	T
M.A.I.S. INFORMATION	NOS	7	X
M.D.D.I. THE GRAY SHEET	NOS	7	N
M.D.I. QUARTERLY BULLETIN	NOS	7	X
M.I.D.I.S.T. RAPPORT ANNUEL D' ACTIVITE.	INST FILES	5	X

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M.I.D.I.S.T. [ANNUAL REPORT, ETC]	INST FILES*	5	X
M.M.W.R.: CEN FOR DISEASE CONT MORB & MORT WEEKLY REP	PER	1	N
MADRE Y NINOS	AID PER	2	X
MAJALAH I.L.M.I.A.H.	NOS	7	X
MANAGEMENT SCIENCE	PER	1	X
MARINE SCIENCE CONTENTS TABLE (F.A.O.)	NOS	7	T
MAZANGIRA	PER	1	X
MEDIA	PER	1	C
MEDIA ASIA	PER	1	C
MEDICAL LETTER	PER	1	N
MIDWEST UNIV'S CONSORTIUM FOR INTL ACTIV [ANN RE, ETC]	INST FILES*	5	X
MILBANK MEMORIAL FUND [ANNUAL REPORT, ETC]	INST FILES*	5	X
MILBANK MEMORIAL FUND QUARTERLY	PER	1	X
MINISIS NEWSLETTER	PER	1	M
MONITOR	PER	1	X
MONTHLY BULLETIN OF AGRICULTURAL ECON & STATISTICS	PER	1	A
MONTHLY BULLETIN OF STATISTICS	PER	1	X
MONTHLY VITAL STATISTICS REPORTS	PER	1	X
MOTHER EARTH NEWS	PER	1	M
MYSORE JOURNAL OF AGRICULTURAL SCIENCES	PER	1	A
N.C.I.H. NEWSLETTER	AID PER	2	X
N.F.E. EXCHANGE	AID PER	2	J
N.R.E.C.A.	PER	1	X
N.T.I.S. - CIVIL ENGINEERING	PER	1	T
N.T.I.S. - HEALTH PLANNING	PER	1	N
N.T.I.S. - LIBRARY & INFORMATION SCIENCES	PER	1	M
N.T.I.S. NEWSLINE	PER	1	X
N.U.F.F.I.C. BULLETIN	NOS	7	X
NATIONAL ACADEMY OF SCIENCES [ANNUAL REPORT, ETC]	INST FILES*	5	T
NATIONAL INSTITUTE OF FAM PLAN. NIFP MONOGRAPH SERIES	SERIAL SHELF	4	P
NATIONAL INSTITUTE OF FAM PLAN. NIFP TECHNICAL PAPER.	SERIAL SHELF	4	P
NATIONAL INSTITUTE OF FAM PLAN. NIFP REPORT SERIES.	SERIAL SHELF	4	P
NATIONAL INSTITUTE OF SCIENCE & TECH [ANN RE, ETC]	INST FILES*	5	T
NATIONAL RESEARCH COUNCIL IN 1978	INST FILES	5	X
NATIONAL RURAL ELECTRIC COOPERATIVE ASS [ANN RE, ETC]	INST FILES*	5	X
NATIONAL SCIENCE FOUNDATION BULLETIN	NOS	7	T
NATIONAL SCIENCE FOUNDATION [ANNUAL REPORT, ETC]	INST FILES*	5	T
NATIONAL TECHNICAL INFORMATION SERVICE [ANN RE, ETC]	INST FILES*	5	T
NATURAL RESOURCE TECHNICAL BULLETIN	AID PER	2	T
NATURE SOURCES	PER	1	X
NEAR EAST FOUNDATION [ANNUAL REPORT, ETC]	INST FILES*	5	X
NETHERLANDS ORGAN FOR INTL DEVE COOP [ANN RE, ETC]	INST FILES*	5	D
NETWORK	AID PER	2	P
NETWORK (A.T. INTERNATIONAL)	AID PER	2	T
NETWORK FOR ENVIRONMENT & DEVELOPMENT	PER	1	D
NEW ENGLAND JOURNAL OF MEDICINE	PER	1	N
NEW TRANSCENTURY FOUNDATION [ANNUAL REPORT, ETC]	INST FILES*	5	X
NEW ZEA ASS FOR INTL RELIEF, REHAB & DEV [ANN RE, ETC]	INST FILES*	5	D
NEWS FROM CAST	PER	1	X
NEWS FROM I.C.A.R.D.A.	PER	1	X
NEWS OF COOPERATIVE DEVELOPMENT	AID PER	2	D
NEWS REPORT	AID PER	2	X
NEWSLETTER - FAMILY PLANNING INTERNATIONAL ASSISTANCE	AID PER	2	P

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NEWSLETTER - SCIENCE AND TECHNOLOGY FOR DEVELOPMENT	PER	1	T
NEWSLETTER OF THE OECD DEVELOPMENT CENTRE	PER	1	D
NEWSLETTER ON RURAL FINANCIAL MARKET RESEARCH & POLICY	AID PER	2	D
NORTH-SOUTH NEWS	PER	1	X
NORTH-SOUTH NEWS	1656 NS	8	X
NOTES (LAC RESEARCH EVALUATION & DEVELOPMENT)	AID PER	2	X
NOTI-CIAT	AID PER	2	A
NUTRITION PLANNING	AID PER	2	A
O.E.C.D. OBSERVER	PER	1	D
OB-GYN NEWS	PER	1	N
OB-GYN SURVEY	PER	1	N
OPERATIONS RESEARCH	PER	1	X
OPPORTUNITIES INDUSTRIALIZATION CTR INTL [ANN RE, ETC]	INST FILES*	5	X
OPTIONS FOR POLICY & PRACTICE	PER	1	X
ORGANIZATION FOR ECON COOP & DEV [ANNUAL REPORT, ETC]	INST FILES*	5	D
ORGANIZATION OF AMERICAN STATES [ANNUAL REPORT, ETC]	INST FILES*	5	X
OTHER SIDE, THE	PER	1	X
OUTLOOK ON SCIENCE & POLICY	PER	1	T
OVERSEAS DEVELOPMENT COUNCIL [ANNUAL REPORT, ETC]	INST FILES*	5	D
OVERSEAS ED FUND OF THE LEA OF WOMEN VOT [ANN RE, ETC]	INST FILES*	5	J
OVERSEAS LIAISON COMMITTEE [ANNUAL REPORT, ETC]	INST FILES*	5	X
OVERSEAS PRIVATE INVESTMENT CORPORATION [ANN RE, ETC]	INST FILES*	5	D
OVERVIEW: THE INTERNATIONAL JOURNAL OF POP LIBRARIES	AID PER	2	M
OXFAM-AMERICA [ANNUAL REPORT, ETC]	INST FILES*	5	X
P.A.H.O. OFFICIAL DOCUMENTS	PAHO DOC	3	N
P.A.H.O. WEEKLY EPIDEMIOLOGICAL REPORT	PER	1	N
P.A.R.F.R.	AID PER	2	X
P.P.C./P.D.P.R./C.P. - SILVERSTONE WEEKLY REPORT	1656 NS	8	X
P.S.D. - POPULATION & SOCIAL DEV - COMM NEWSLETTER	AID PER	2	P
PAKISTAN DEVELOPMENT REVIEW	PER	1	D
PAN AMERICAN DEVELOPMENT FOUND [ANNUAL REPORT, ETC]	INST FILES*	5	D
PAN AMERICAN HEALTH	PER	1	N
PAN AMERICAN HEALTH ORGAN. PUBLICATIONS CIENTIFICA.	PAHO DOC	3	N
PAN AMERICAN HEALTH ORGAN. SCIENTIFIC PUBLICATIONS.	PAHO DOC	3	N
PAN AMERICAN HEALTH ORGAN [ANNUAL REPORT, ETC]	INST FILES*	5	N
PARIS REPORTS	PER	1	X
PARIS REPORTS (OECD)	1656 NS	8	X
PARKS	AID PER	2	A
PARTNERS	PER	1	X
PARTNERS OF THE AMERICAS [ANNUAL REPORT, ETC]	INST FILES*	5	X
PARTNERSHIP FOR PRODUCTIVITY FOUND/USA [ANN RE, ETC]	INST FILES*	5	X
PASITAM DESIGN NOTES	AID PER	2	D
PASITAM NEWSLETTER	AID PER	2	D
PATHFINDER FUND [ANNUAL REPORT, ETC]	INST FILES*	5	X
PATHPAPERS	AID PER	2	X
PEACE CORPS TIMES	PER	1	D
PEDIATRIC RESEARCH	PER	1	N
PEOPLE	PER	1	P
PEOPLE-TO-PEOPLE HEALTH FOUNDATION, INC [ANN RE, ETC]	INST FILES*	5	N
PEST MANAGEMENT NEWS	AID PER	2	A
PESTICIDE & TOXIC CHEMICAL NEWS	PER	1	A

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PESTICIDE CHEMICAL NEWS GUIDE	NOS	7	A
PETROLEUM NEWS	PER	1	T
PETROLEUM ECONOMIST	PER	1	D
PLANNED PARENTHOOD - WORLD POPULATION WASHINGTON MEMO	PER	1	P
PLANNED PARENTHOOD - WORLD POPULATION [ANN RE, ETC]	INST FILES*	5	P
PLANNED PARENTHOOD PROGRAM CHURCH WORLD SERVICE	PER	1	P
PLANNING & DEV COLLABORATIVE INTL [ANNUAL REPORT, ETC]	INST FILES*	5	X
POCO A POCO	PER	1	X
POPULATION AND DEVELOPMENT NEWS	PER	1	P
POPULATION AND VITAL STATISTICS RPORT	UN DOC	3	P
POPULATION BULLETIN (POPULATION REFERENCE BUREAU)	PER	1	P
POPULATION BULLETIN OF THE UNITED NATIONS	PER	1	P
POPULATION BULLETIN OF THE ECON COMM FOR WESTERN ASIA	PER	1	P
POPULATION CHRONICLE	PER	1	P
POPULATION COMMUNICATION	PER	1	P
POPULATION COUNCIL [ANNUAL REPORT, ETC]	INST FILES*	5	P
POPULATION CRISIS	PER	1	P
POPULATION DYNAMICS QUARTERLY	PER	1	P
POPULATION HEADLINERS	PER	1	P
POPULATION INDEX	PER	1	P
POPULATION MONOGRAPH SERIES. UNIV. OF CAL, BERKELEY.	SERIAL SHELF	4	P
POPULATION NEWSLETTER OF THE UNITED NATIONS	PER	1	P
POPULATION PROFILES	PER	1	P
POPULATION REFERENCE BUREAU. MONOGRAPHS.	OTHER	6	P
POPULATION REFERENCE BUREAU, INC [ANNUAL REPORT, ETC]	INST FILES*	5	P
POPULATION REPORTS - ARABIC	AID PER	2	P
POPULATION REPORTS - ENGLISH	AID PER	2	P
POPULATION REPORTS - FRENCH	AID PER	2	P
POPULATION REPORTS - PORTUGUESE	AID PER	2	P
POPULATION REPORTS - SPANISH	AID PER	2	P
POPULATION SERVICES INTL [ANNUAL REPORT, ETC]	INST FILES*	5	P
POPULATION STUDIES	PER	1	P
POPULATION; U.N.F.P.A. NEWSLETTER	PER	1	P
POPULI	PER	1	P
POST-HARVEST QUARTERLY	AID PER	2	A
POWER	PER	1	T
PRIVATE AGENCIES COLLABORATING TOGETHER [ANN RE, ETC]	INST FILES*	5	X
PROCEEDINGS OF THE ROYAL SOCIETY OF MEDICINE	PER	1	N
PROGRAM QUARTERLY	PER	1	X
PROJECT CONCERN INTL [ANNUAL REPORT]	INST FILES*	5	X
PROJECT FOCUS	PER	1	X
PROJECT PROFILES	PER	1	C
PROSPECTS. QUARTERLY REVIEW OF EDUCATION.	PER	1	J
PROSTAGLANDINS	PER	1	N
PUBLIC ADMINISTRATION AND DEVELOPMENT	PER	1	D
PUBLIC WORKS	PER	1	T
PUBLICATIONS LIST (FROM VARIOUS ORGANIZATIONS)	OTHER	6	X
QUARTERLY ECONOMIC REVIEW	PER	1	D
QUARTERLY NEWSLETTER TO FACIL SMALL INDUST DEV NETWORK	AID PER	2	D
R. & D. MEXICO	PER	1	D
R.C.T.T. NEWSLETTER	PER	1	T

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R.C.T.T. TECHNICAL DIGEST	PER	1	T
R.E.C.S.A.M. NEWSLETTER	AID PER	2	X
R.E.L.C. NEWSLETTER	AID PER	2	X
RECONNECTION	PER	1	X
RENEWABLE ENERGY REVIEW JOURNAL	PER	1	T
REPORT - NEWS FROM THE WORLD BANK	PER	1	D
REPORT FROM P.S.I.	AID PER	2	X
REPORTER ON HUMAN REPRODUCTION AND THE LAW	PER	1	P
REPORTS AND PAPERS ON MASS COMMUNICATION	PER	1	C
REPORTS ON POPULATION/FAMILY PLANNING	PER	1	P
REPORTS ON RESEARCH - M.I.T. I.L.P.	PER	1	X
REPRINT SERIES - INSTITUTE FOR INTER ECONOMIC STUDIES	PER	1	D
RESEARCH. ANNUAL REPORT.	INST FILES	5	X
RESEARCH CORPORATION [ANNUAL REPORT]	INST FILES*	5	X
RESEARCH IN REPRODUCTION	PER	1	P
RESEARCH TRIANGLE INSTITUTE [ANNUAL REPORT, ETC]	INST FILES*	5	X
RESOURCES FOR THE FUTURE [ANNUAL REPORT, ETC]	INST FILES*	5	X
RESOURCES JOURNAL	PER	1	X
REVIEW OF POPULATION REVIEWS	PER	1	P
ROCKEFELLER FOUNDATION [ANNUAL REPORT, ETC]	INST FILES*	5	X
ROCKEFELLER FOUNDATION PROG IN AGR SCIEN [ANN RE, ETC]	INST FILES*	5	A
RUBBER RESEARCH INST OF MALAYSIA [ANNUAL REPORT, ETC]	INST FILES*	5	A
RURAL DEVELOPMENT NETWORK BULLETIN	AID PER	2	D
RURAL DEVELOPMENT PARTICIPATION REVIEW	AID PER	2	D
RURAL PROGRESS	PER	1	X
RURAL SOCIOLOGY	PER	1	S
RURAL TECHNOLOGY BULLETIN	AID PER	2	T
S.A.D.E.X.	AID PER	2	D
S.A.D.E.X.	1656 NS	8	X
S.E.A.F.D.E.C. NEWSLETTER	AID PER	2	X
S.E.A.M.E.O. QUARTERLY	AID PER	2	X
S.E.A.R.C.A. DIARY	AID PER	2	X
S.E.A.R.C.A. [ANNUAL REPORT, ETC]	INST FILES*	5	X
S.E.A.T.E.C., INTL CONSULTING ENGINEERS [ANN RE, ETC]	INST FILES*	5	X
S.E.C.I.D. NEWS	AID PER	2	X
S.I.E.C.U.S. REPORT	PER	1	P
S.M.I.C. NEWSLETTER	AID PER	2	X
SAGE (RUSSELL) FOUNDATION [ANNUAL REPORT, ETC]	INST FILES*	5	X
SAHEL BIBLIOGRAPHIC BULLETIN	AID PER	2	Z
SALK INSTITUTE NEWSLETTER	PER	1	X
SALUBRITAS	AID PER	2	N
SAVE THE CHILDREN FEDERATION, INC [ANNUAL REPORT, ETC]	INST FILES*	5	X
SAVINGS AND DEVELOPMENT	PER	1	D
SCHISTO UPDATE	AID PER	2	N
SCIENCE	PER	1	T
SCIENCE AND GOVERNMENT REPORT	PER	1	T
SCIENCE AND PUBLIC POLICY	PER	1	T
SCIENCE AND TECHNOLOGY FOR DEVELOPMENT	NOS	7	T
SCIENCE AND TECHNOLOGY QUARTERLY	PER	1	T
SCIENCE NEWS	PER	1	T
SCIENTIFIC AMERICAN	PER	1	T
SEMILLAS PARA AMERICA LATINA	AID PER	2	X
SIGNS	PER	1	X

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SMITHSONIAN INST, INTERDISC COMM PROG. OCC MONO SER.	SERIAL SHELF	4	X
SOCIAL BIOLOGY	PER	1	T
SOCIAL MARKETING UPDATE	AID PER	2	D
SOCIAL SCIENCE AND MEDICINE	PER	1	S
SOCIAL SCIENCE RESEARCH COUNCIL [ANNUAL REPORT, ETC]	INST FILES*	5	S
SOIL SCIENCE	PER	1	A
SOIL TAXONOMY NEWS	AID PER	2	A
SOLAR ENERGY	PER	1	T
SOLAR ENERGY INTELLIGENCE REPORT	PER	1	T
SOUNDINGS	PER	1	X
SOUTH	PER	1	X
SOUTH-EAST CONSORTIUM FOR INTL DEVELOP [ANN RE, ETC]	INST FILES*	5	D
SOUTHEAST ASIAN FISHERIES DEV CENTER [ANN RE, ETC]	INST FILES*	5	A
SOUTHEAST ASIAN JOURNAL OF TROP MED AND PUBLIC HEALTH	AID PER	2	N
SOUTHEAST ASIAN MIN OF EDUC SECRETARIAT [ANN RE, ETC]	INST FILES*	5	J
SPOKESWOMEN, THE	PER	1	S
STANFORD RESEARCH INSTITUTE [ANNUAL REPORT, ETC]	INST FILES*	5	X
STUDIES IN FAMILY PLANNING	PER	1	P
SUDANOW	PER	1	D
SURVEY OF INTERNATIONAL DEVELOPMENT	AID PER	2	D
T.A.I.C.H. ACQUISITIONS LIST	OTHER	6	X
T.A.I.C.H. NEWS	AID PER	2	X
T.C.D.C. NEWS	PER	1	X
T.I.E.S. NEWSLETTER	PER	1	X
TECHNOLOGY CONSULTANCY CENTRE [ANNUAL REPORT, ETC]	INST FILES*	5	T
TECHNOLOGY DIFFUSION REPORTS (A.T. INTERNATIONAL)	AID PER	2	T
TECHNOLOGY TRANSFER NEWS	PER	1	T
TECHNONET ASIA NEWSLETTER	PER	1	X
TECHNOSERVE NEWSLETTER	PER	1	X
TECHNOSERVE, INC [ANNUAL REPORT, ETC]	INST FILES*	5	X
THE BULLETIN OF THE ATOMIC SCIENTISTS	PER	1	T
THE NATION'S HEALTH	PER	1	N
THIRD WORLD QUARTERLY	PER	1	D
TOPIC	PER	1	X
TRANET	PER	1	X
TRANSACTIONS OF THE ROYAL SOC OF TROP MED & HYGIENE	PER	1	N
TRANSNATIONAL PERSPECTIVES	PER	1	X
TRITICALE ABSTRACTS	NOS	7	A
TROPICAL DISEASES BULLETIN	PER	1	N
U.N. MONTHLY CHRONICLE	PER	1	X
U.N.I.D.O. NEWSLETTER	PER	1	X
U.N.I.S.I.S.T.	PER	1	X
U.N.I.T.E.R.R.A.	PER	1	X
U.N.U. NEWSLETTER	PER	1	X
U.S. BUR OF CENSUS INTL DEM DATA CENTER [ANN RE, ETC]	INST FILES*	5	P
U.S. FOREST SERVICE [ANNUAL REPORT, ETC]	INST FILES*	5	X
U.S.D.A. OFF OF INTL COOP & DEVE [ANNUAL REPORT, ETC]	INST FILES*	5	A
J.S.D.A. [ANNUAL REPORT, ECT]	INST FILES*	5	X
U.S.D.O.T. OFF OF INTL POL & PROG [ANNUAL REPORT, ETC]	INST FILES*	5	X
U.S.H.U.D. OFFICE OF INTL AFFAIRS [ANNUAL REPORT, ETC]	INST FILES*	5	X
UNASYLVA	PER	1	A

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UNIT	PER	1	X
UNITED NATIONS CONFERENCE ON TRADE & DEV [ANN RE, ETC]	INST FILES*	5	D
UNITED NATIONS FUND FOR POP ACT. REP BY EXEC DIRECTOR	INST FILES	5	P
UNITED NATIONS FUND FOR POP ACTIVITIES [ANN RE, ETC]	INST FILES*	5	P
UNITED NATIONS INDUSTRIAL DEVELOPMENT ORG. ANNUAL REP	INST FILES	5	D
UNITED STATES COMM FOR REFUGEES, INC. WORLD REF SURV.	INST FILES	5	X
UNITED STATES COMMITTEE FOR REFUGEES [ANN RE, ETC]	INST FILES*	5	X
UPDATE	AID PER	2	X
UPLINK	AID PER	2	X
URBAN EDGE, THE	PER	1	X
URBAN INNOVATION ABROAD	PER	1	X
URBAN INSTITUTE [ANNUAL REPORT, ETC]	INST FILES*	5	X
V.I.T.S. NEWS	PER	1	X
VISCA VISTA	PER	1	X
VITAL AND HEALTH STATISTICS	PER	1	N
VOLUNTEERS IN TECHNICAL ASSISTANCE, INC [ANN RE, ETC]	INST FILES*	5	X
W.H.O. CHRONICLE	PER	1	N
W.H.O. FOOD ADDITIVES SERIES.	WHO DOC	3	N
W.H.O. HANBOOK OF RESOLUTIONS & DECISIONS.	WHO DOC	3	N
W.H.O. PUBLIC HEALTH PAPERS.	WHO DOC	3	N
W.H.O. TECHNICAL REPORT SERIES.	WHO DOC	3	N
W.H.O. VACCINATION CERTIFICATE REQUIRE FOR INT TRAVEL	WHO DOC	3	N
W.H.O. WORLD HEALTH STATISTICS.	WHO DOC	3	N
W.K. KELLOG FOUNDATION. ANNUAL REPORT.	INST FILES	5	X
WAR ON HUNGER (NEW AGENDA)	AID PER	2	N
WASHINGTON ACTIONS ON HEALTH & HEALTH CARE WEEK	PER	1	N
WASHINGTON REPORT ON MEDICINE AND HEALTH	PER	1	N
WATER RESEARCH	PER	1	A
WATER RESEARCH CENTRE [ANNUAL REPORT, ETC]	INST FILES*	5	X
WATER RESOURCES BULLETIN	PER	1	A
WATERFRONT	PER	1	X
WEST AFRICA RICE DEV ASSOC, INC [ANNUAL REPORT, ETC]	INST FILES*	5	A
WOMEN 1980	NOS	7	S
WORLD ANIMAL REVIEW	PER	1	A
WORLD BANK PRESS RELEASES	PER	1	D
WORLD BANK [ANNUAL REPORT, ETC]	INST FILES*	5	D
WORLD BANK. WORLD DEVELOPMENT REPORT 1980.	INST FILES	5	D
WORLD COAL	PER	1	T
WORLD DEVELOPMENT	PER	1	D
WORLD DEVELOPMENT LETTER	AID PER	2	D
WORLD DEVELOPMENT NEWSLETTER	1656 NS	8	D
WORLD EDUCATION, INC [ANNUAL REPORT, ETC]	INST FILES*	5	J
WORLD EDUCATION/WORLD EDUCATION REPORTS	AID PER	2	J
WORLD ENVIRONMENT REPORT	PER	1	T
WORLD FERTILITY	PER	1	P
WORLD FERTILITY SURVEY, W.F.S. DIARY	SERIAL SHELF	4	P
WORLD FERTILITY SURVEY. BASIC DOCUMENTATION.	SERIAL SHELF	4	P
WORLD FERTILITY SURVEY. OCCASIONAL PAPERS.	SERIAL SHELF	4	P
WORLD FERTILITY SURVEY. SCIENTIFIC REPORTS.	SERIAL SHELF	4	P
WORLD FERTILITY SURVEY. TECHNICAL BULLETIN.	SERIAL SHELF	4	P
WORLD FERTITITY SURVEY NEWSLETTER	PER	1	P

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WORLD HEALTH FORUM	PER	1	N
WORLD HEALTH ORGANIZATION [ANNUAL REPORT, ETC]	INST FILES*	5	N
WORLD HEALTH ORGANIZATION. BASIC DOCUMENTS.	WHO DOC	3	N
WORLD HEALTH ORGANIZATION. (MISCELLANEOUS PUB.'S)	WHO DOC	3	N
WORLD HEALTH ORGANIZATION. MONOGRAPH SERIES.	WHO DOC	3	N
WORLD HEALTH ORGANIZATION OFFICIAL RECORDS.	WHO DOC	3	N
WORLD HEALTH STATISTICAL ANNUAL.	WHO DOC	3	N
WORLD HEALTH STATISTICS REPORTS	NOS	7	N
WORLD HEALTH.	PER	1	N
WORLD HOSPITALS	PER	1	N
WORLD NEIGHBORS IN ACTION	PER	1	X
WORLD NEIGHBORS, INC [ANNUAL REPORT, ETC]	INST FILES*	5	X
WORLD VISION RELIEF ORGANIZATION, INC [ANN RE, ETC]	INST FILES*	5	X
WORLDWATCH PAPER	SERIAL SHELF	4	X
YOUNG MEN'S CHRISTIAN ASSOC OF THE USA [ANN RE, ETC]	INST FILES*	5	X
YOUNG WOMEN'S CHRISTIAN ASSOC OF THE USA [ANN RE, ETC]	INST FILES*	5	X
Z.P.G. REPORTER	PER	1	P
ZAMBIA COUNCIL FOR SOCIAL DEV (ZCSD) [ANN RE, ETC]	INST FILES*	5	D

Appendix C

Subject Authority Files

	RANDD	DIS
1. AGRIS Subject Code	X	
2. Dewey Decimal Classification	X	
3. DIS Thesaurus (AVOCON)		X
4. FAO Codes	X	
5. Library of Congress Subject Headings	X	
6. Major Class Code	X	
7. Purpose Codes		X
8. RANDD Keywords	X	
9. Secondary Subject Category Code	X	
10. Special Concern Codes		X
11. Technical Codes		X

Appendix D

RC-BASIC An 8-digit code. Will be assigned by Phyllis Levine of DI. First digit is traffic code. Traffic codes are:

- 2 other AID/W
- 3 domestic address
- 5 foreign recipient (non-AID)
- 6 AID Africa bureau and missions
- 7 AID LA bureau and missions
- 8 AID Asia bureau and missions
- 9 AID NE bureau and missions

If traffic code is 3, RC-BASIC consists of: "3" traffic code, 2-digit state code, 5-digit zipcode.

If traffic code is 5, RC-BASIC consists of: Traffic code, 3-digit AID geo-code, 4-digit international city code.

For traffic codes 2 and 6-9 (AID), digits 2 through 8 of RC-BASIC will consist of 1120523.

RC-SEQ A unique sequence number for ALL recipient codes. This number is automatically set by the ADDINPUT procedure using the count file 'D515LW.ADDS.UNIQUE.DATA'. This number is incremented once for each transaction saved. The number in the count file is updated when exiting from ADDINPUT procedure.

RD-EN-DT Record entered date. E.g.: 810207. (See also, QST-DATA below.) Automatically assigned by the ADDINPUT procedure.

RD-RV-DT Record revised date. Automatically assigned by the ADDINPUT procedure.

ADDRESSES

ADDs addresses do NOT contain any personal names--only title, position, office, or institution. If a personal name is written on the questionnaire, omit it.

All address lines are 39 characters in length, except for the _____ line which is 34 characters.

AD-LINE1 through AD-LINE4:

These lines will contain title, department, institution, in ascending order. Start with AD-LINE1 (which is a required field). If there is not enough room on one line, acronyms may be placed on the line following the spelled-out name. All 4 lines need not be filled in. AD-LINE4 may contain a P.O. Box number, if there is also a street address to occupy AD-STADR.

Appendix D

Aid Document Distribution System (ADDS) Procedures for on-line data entry (Wang doc # 0276Z Rev. 5/20/81)

USERID: A430AD/PPAD
ACCT #: ADBL4
PROC: INQ

Input procedure: Exec 'D515LW.DIS.CLIST(ADDINPUT)'

Transaction save file: 'D515LW.ADDS.SAVETRAN.DATA'

Count file which provides
unique sequence number: 'D515LW.ADDS.UNIQUE.DATA'

Note: Wait for ":" to enter data. Any data entered before ":" is not accepted.

Note: Do not use ampersands (&), these create an error condition which terminates the procedure. Use plus signs (+) instead.

After entering data, request a printout for proofing. Once proofed and corrected, copy 'D515LW.ADDS.SAVETRAN.DATA' into 'A430.ADDS.SAVETRAN.DATA' (numbered datasets). Then edit 'A430.ADDS.SAVETRAN.DATA' and change all "+" characters to "&". Submit 'D515LW.DIS.CNTL(ADSMANT)' to update the ADDS database. Return the questionnaires and proofread printout to Phyllis Levine, DS/DIU/DI. Clear out 'D515LW.ADDS.SAVETRAN.DATA' before entering more information.

If "break" key is hit during procedure, or if some other error occurs which causes an abnormal exit from the procedure, the procedure will flash a message that it has saved all completed transactions (but not the one being worked on when the error occurred). Re-start the procedure and begin the half-finished transaction over again.

If, on the other hand, the system goes down, or if the system logs you off because of inactivity at the terminal, then the procedure has not displayed the "transaction saved" message and you must determine, by editing the dataset, where you left off. Use the EDITSAVE file or the EDITUTL1 file, if there is one, to recover your work. You also must check the next to last line number of the dataset: the number in D515LW.ADDS.UNIQUE.DATA should be set at one greater. The procedure uses this number for the RC-SEQ as well as the line number of the first line of the transaction.

If the line drops, try logging on again with the same userid specifying the "reconnect" operand.

RECIP-CD Recipient code. Made up of 8-digit RC-BASIC and 5-digit sequence number (RC-SEQ).

Appendix D

- AD-STADR Street address. Where information provided is unclear (foreign language) use best judgement to determine what information should go on street address line.
- AD-STCTY City and state (abbreviate only if necessary); or city and country (if foreign). Foreign "zipcodes" should be put on this line.
- AD-ZIP US Zipcodes only. The zip is added automatically by the ADDINPUT procedure by extracting it from RC-BASIC with traffic codes other than 5.
- TITLERCD Normally blank. If checked on questionnaire, enter "Y".
- MICROFHE If checked, enter "1".
- STATUS-C Should be 1, 2, or 3. (Don't enter the initial 0).
- TYPORG-C Enter the 2-digit number checked. If more than one number is checked, choose the best number or call Phyllis Levine of DI.
- GEO-INTR Only one area may be entered. If more than one sub-region is checked, enter the region number. If more than one region is checked, enter "10" for worldwide.
- FLD-INTR Enter up to 40 codes.
- QST-DATA This is always the year and month of RD-EN-DT value plus the letter X. E.g.: 8102X. This data is provided automatically by the ADDINPUT procedure.
- LAST-LBL Omit.
- RCI-RCV Omit.
- OFC-CHAR The first 5 digits is an internal AID code identifying the AID office that is primarily interested in this particular record. This code now, however, is always 31067 which stands for DS/DIU--the only office in AID maintaining ADDS. Automatically assigned by ADDINPUT procedure.
- OC-CHAR1, OC-CHAR2, OC-CHAR3
- Subfields of OFC-CHAR.
- These are organization type codes referred to as "LISTID" codes. See attachment for list. These will be assigned by DI.
- OC-IND These one-digit code is now always blank. Used to indicate a tentative or permanent interest.

Appendix D

For on-line maintenance, use: 'A430.CLIST(ADDS)'
This allocates 'A430.ADDS.MACRO.DATA' which contains the following macros:

D FROM SYSLIB

00000010 REPLACE RD-RV-DT BY &DATE IN &SEARCH.

C FROM SYSLIB

00000010 AD-LINE1 CONTAINS '&PARM' OR AD-LINE2 CONTAINS '&PARM'
00000020 OR AD-LINE3 CONTAINS '&PARM' OR AD-LINE4 CONTAINS '&PARM'

|FIND RECIP-CD=31120036* AND &C(FOOD EDUC), BREAK ON RECIP-CD RECIP-CD.

QUERY AFTER MACRO EXPANSION..

FIND RECIP-CD=31120036* AND AD-LINE1 CONTAINS 'FOOD EDUC' OR AD-LINE2
CONTAINS 'FOOD EDUC' OR AD-LINE3 CONTAINS 'FOOD EDUC' OR AD-LINE4 CONTAINS
'FOOD EDUC' ,BREAK ON RECIP-CD RECIP-CD.

3112003620234

ITEMS RETRIEVED 1

F FROM SYSLIB

00000010 FIND RECIP-CD=&PARM,LIST RECIP-CD RD-RV-DT AD-LINE1 AD-LINE2
00000020 AD-LINE3 AD-LINE4 AD-STADR AD-STCTY AD-ZIP.

||&F(3112003620234)

QUERY AFTER MACRO EXPANSION..

FIND RECIP-CD=3112003620234,LIST RECIP-CD RD-RV-DT AD-LINE1 AD-LINE2 AD-LINE3
AD-LINE4 AD-STADR AD-STCTY AD-ZIP.

ITEM	5617
RECIP-CD	3112003620234
RD-RV-DT	790730
AD-LINE1	EXECUTIVE DIRECTOR
AD-LINE2	LEAGUE FOR INTERNATIONAL FOOD EDUCATION
AD-LINE3	ROOM 404
AD-LINE4	
AD-STADR	1126 16TH STREET, N.W.
AD-STCTY	WASHINGTON, D.C.
AD-ZIP	20036

ITEMS RETRIEVED 1

Appendix D

DOC-DATA Title of requested document and number of copies desired. For now, will always be "ARDA01". (If one institution wants more than one copy, there should be an additional record on ADDS with, presumably, a different title or office as recipient.) This data is provided automatically by the ADDINPUT procedure.

The ADDINPUT procedure will provide the ADD and END commands where needed.

HH keyed ADDS questionnaires at the rate of 14/hour; including proofreading, total data entry time was 10 forms/hour.

DATABASE 'ADDS

Appendix D

FIELD NAME	KEY	TYPE	STORED LENGTH	STRUC	RPTS	- PRINT - FORM LEN	NOTES
RECIP-CD	PFX	CHR	13	BASE	SCALAR	NB 13	
RC-BASIC	PFX	CHR	8	SUBF	SCALAR	NB 8 POS	1 TO 8(RECIP-CD)
RC-ZIPSQ		CHR	10	SUBF	SCALAR	NB 10 POS	4 TO 13(RECIP-CD)
RC-CTYSQ		CHR	9	SUBF	SCALAR	NB 9 POS	5 TO 13(RECIP-CD)
RC-SEQ		UNP	5	SUBF	SCALAR	I ** 5 POS	9 TO 13(RECIP-CD)
RC-TRAFF	PFX	CHR	1	SUBF	SCALAR	NB 1 POS	1 TO 1(RECIP-CD)
RC-STATE	PFX	CHR	2	SUBF	SCALAR	NB 2 POS	2 TO 3(RECIP-CD)
RC-ZIP	PFX	CHR	5	SUBF	SCALAR	NB 5 POS	4 TO 8(RECIP-CD)
RC-CTRY	PFX	CHR	3	SUBF	SCALAR	NB 3 POS	2 TO 4(RECIP-CD)
RC-CITY	PFX	CHR	4	SUBF	SCALAR	NB 4 POS	5 TO 8(RECIP-CD)
RD-EN-DT		UNP	6		SCALAR	I ** 6	
RD-RV-DT		UNP	6		SCALAR	I ** 6	
AD-LINE1		CHR	39		SCALAR	NB 39	
AD-LINE2		CHR	39		SCALAR	NB 39	
AD-LINE3		CHR	39		SCALAR	NB 39	
AD-LINE4		CHR	39		SCALAR	NB 39	
AD-STADR		CHR	39		SCALAR	NB 39	
AD-STCTY		CHR	34		SCALAR	NB 34	
AD-ZIP		CHR	5		SCALAR	NB 5	
TITLERCD		CHR	1		SCALAR	NB 1	
MICROFHE		UNP	1		SCALAR	I ** 1	
STATUS-C		UNP	1		SCALAR	I ** 1	
TYPORG-C		UNP	2		SCALAR	I ** 2	
GEO-INTR	PFX	CHR	2		SCALAR	NB 2	
QST-DATA		CHR	5	BASE	SCALAR	NB 5	
QST-DATE		UNP	4	SUBF	SCALAR	I ** 4 POS	1 TO 4(QST-DATA)
QST-YEAR		UNP	2	SUBF	SCALAR	I ** 2 POS	1 TO 2(QST-DATA)
QST-MNTH		UNP	2	SUBF	SCALAR	I ** 2 POS	3 TO 4(QST-DATA)
QST-IND		CHR	1	SUBF	SCALAR	NB 1 POS	5 TO 5(QST-DATA)
LAST-LBL		UNP	6		SCALAR	I ** 6	
RCI-RCV		CHR	16	BASE	SCALAR	NB 16	
RR-GRP81		CHR	8	SUBF	SCALAR	NB 8 POS	1 TO 8(RCI-RCV)
RR-GRP82		CHR	8	SUBF	SCALAR	NB 8 POS	9 TO 16(RCI-RCV)
RR-GRP41		CHR	4	SUBF	SCALAR	NB 4 POS	1 TO 4(RCI-RCV)
RR-GRP42		CHR	4	SUBF	SCALAR	NB 4 POS	5 TO 8(RCI-RCV)
RR-GRP43		CHR	4	SUBF	SCALAR	NB 4 POS	9 TO 12(RCI-RCV)
RR-GRP44		CHR	4	SUBF	SCALAR	NB 4 POS	13 TO 16(RCI-RCV)
FLD-INTR	PFX	CHR	6		V 40 NB	6	
OFC-CHAR		CHR	15	BASE	V 20 NB	15	
OC-OFF	PFX	CHR	5	SUBF	V 20 NB	5 POS	1 TO 5(OFC-CHAR)
OC-CHAR1	PFX	CHR	3	SUBF	V 20 NB	3 POS	6 TO 8(OFC-CHAR)
OC-CHAR2	PFX	CHR	3	SUBF	V 20 NB	3 POS	9 TO 11(OFC-CHAR)
OC-CHAR3	PFX	CHR	3	SUBF	V 20 NB	3 POS	12 TO 14(OFC-CHAR)
OC-IND		CHR	1	SUBF	V 20 NB	1 POS	15 TO 15(OFC-CHAR)
DOC-DATA		CHR	6	BASE	V 30 NB	6	
DD-TITLE	PFX	CHR	4	SUBF	V 30 NB	4 POS	1 TO 4(DOC-DATA)
DD-COPYS		UNP	2	SUBF	V 30 I **	2 POS	5 TO 6(DOC-DATA)
KEYS		BLT	24			S, 24	
ITEMNO		BLT	8		SCALAR	NB 8	
\$FIXED		CHR	293		SCALAR	NB 293	
ALLKEYS		BLT	24			S, 24	

FIELDS WITH A FORMAT OF 'I **' HAVE NO FORMAT DEFINED, 'I' FORMAT ASSUMED

Appendix D

<u>LIST ID CODE</u>	<u>DEFINITION</u>
001	LDC Organization
003	A.I.D. Missions
004	A.I.D./Washington Offices
005	Peace Corps
010	Land Grant University
014	U.S. Government Agency, University
015	International Organization
017	Developed Country Organization
020	Exchange
021	ICA (formerly USIA)
099	Private Voluntary Organization

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

AID RESEARCH AND DEVELOPMENT ABSTRACTS
AND REPORTS QUESTIONNAIRE

[Empty rectangular box for address information]

IF THE ADDRESS ABOVE IS NOT CORRECT PLEASE PRINT OR TYPE
THE CORRECT ADDRESS BELOW:

(AD-LINE1)

TITLE OF INDIVIDUAL WHO IS TO RECEIVE COPIES OF THE ARDA
AND SPECIAL REPORTS

(AD-LINE2)

NAME OF DEPARTMENT WITHIN THE INSTITUTION

(AD-LINE3)

NAME OF INSTITUTION

(AD-LINE4)

ADDRESS (STREET OR POST OFFICE BOX)

(AD-STADR)

CITY, COUNTRY AND POSTAL ZONE

(AD-STCTY)

(AD-ZIP)

THIS QUESTIONNAIRE SHOULD BE FILLED OUT, IF YOUR ORGANIZATION WANTS TO CONTINUE TO RECEIVE THE QUARTERLY PUBLICATION, AID RESEARCH AND DEVELOPMENT ABSTRACTS (ARDA). YOUR ASSISTANCE IN THIS MATTER WILL ENABLE US TO CORRECT, UPDATE, AND REFINE OUR MAILING LIST. THOSE RECIPIENTS WHOSE QUESTIONNAIRES ARE NOT RECEIVED WITHIN 90 DAYS WILL BE REMOVED FROM OUR MAILING LIST.

WE WILL SOON BEGIN TO SEND ANNOUNCEMENTS AND INFORMATION COMPILED ALONG SPECIFIC SUBJECT AND GEOGRAPHICAL LINES. YOUR INDIVIDUAL INTERESTS, EXPRESSED THROUGH THIS QUESTIONNAIRE, WILL PERMIT US TO TARGET DISTRIBUTION OF THESE SELECTIVE MAILINGS APPROPRIATELY TO ARDA RECIPIENTS. OF COURSE, IF YOU COMPLETE AND RETURN THE QUESTIONNAIRE PROMPTLY, YOU WILL CONTINUE TO RECEIVE THE ISSUES OF ARDA REGULARLY.

PLEASE COMPLETE THE THREE PARTS OF THE QUESTIONNAIRE INSIDE: "DESCRIPTION OF ORGANIZATION," "GEOGRAPHICAL AREAS OF INTEREST," AND "FIELDS OF INTEREST." PLEASE CHECK TO SEE THAT YOUR ADDRESS SHOWN ON THIS PAGE IS CORRECT. DO NOT USE PERSONAL NAMES IN YOUR ADDRESS; RATHER, PLEASE INCLUDE YOUR POSITION TITLE AND/OR THE NAME OF YOUR DEPARTMENT/OFFICE WITHIN YOUR INSTITUTION.

WE WILL ALSO APPRECIATE YOUR ADVICE AND ASSISTANCE AS FOLLOWS:

- 1) IF YOU HAVE EVER ORDERED TITLES ANNOUNCED IN ARDA, PLEASE CHECK THIS BOX (TITLERCD)
- 2) IF YOUR ORGANIZATION HAS A MICROFICHE READER, OR ACCESS TO A MICROFICHE READER, PLEASE CHECK THIS BOX (MICROF)
- 3) IF YOU KNOW OF ANY OTHER INSTITUTIONS THAT COULD USE ARDA OR OTHER AID INFORMATION OUTPUTS, PLEASE ASK THEM TO WRITE TO US:

EDITOR OF ARDA
BUREAU FOR DEVELOPMENT SUPPORT
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

Appendix D

PART I - DESCRIPTION OF ORGANIZATION

A. STATUS (STATUS-C)

CHECK THE ONE ITEM WHICH APPLIES TO YOUR INSTITUTION.

- 01 PUBLIC
- 02 PRIVATE
- 03 MIXED - PUBLIC AND PRIVATE

B. TYPE OF ORGANIZATION (TYPORG-C)

CHECK THE ONE ITEM WHICH BEST DESCRIBES YOUR ORGANIZATION. IF YOURS IS A UNIVERSITY OR COLLEGE LIBRARY, SPECIAL LIBRARY, GOVERNMENT LIBRARY, OR RESEARCH LIBRARY, CHECK THE BOX FOR LIBRARY.

- 01 GOVERNMENTAL UNIT
- 02 EDUCATIONAL INSTITUTION
- 03 FINANCIAL INSTITUTION
- 04 LIBRARY
- 05 HOSPITAL OR CLINIC
- 06 INTERNATIONAL ORGANIZATION
- 07 RESEARCH INSTITUTE
- 08 BUSINESS OR CORPORATION
- 09 VOLUNTARY AGENCY
- 10 FOUNDATION
- 11 PROFESSIONAL ASSOCIATION
- 12 OTHER (SPECIFY) _____

PART II - GEOGRAPHIC AREAS OF INTEREST (GEO-INTR)

CHECK THE ONE AREA WHICH IS THE MOST SPECIFIC GEOGRAPHIC INTEREST OF YOUR ORGANIZATION. HOWEVER, IF YOUR ORGANIZATION IS INTERESTED IN ALL OF AFRICA, ASIA, OR LATIN AMERICA, CHECK THE BOX FOR ONE OF THESE AREAS AND DO NOT CHECK ANY OF THE SMALLER AREAS. IF YOUR INTEREST IS TRULY INTERNATIONAL IN SCOPE, CHECK THE BOX FOR WORLDWIDE.

- 10 WORLDWIDE
- 20 AFRICA
 - 21 ANGLOPHONE AFRICA
 - 22 FRANCOPHONE AFRICA
 - 23 CENTRAL AFRICA
 - 24 NORTH AFRICA
 - 25 SOUTH AFRICA
 - 26 EAST AFRICA
 - 27 WEST AFRICA
- 30 LATIN AMERICA
- 31 CENTRAL AMERICA
- 32 SOUTH AMERICA
- 40 ASIA
 - 41 FAR EAST
 - 42 SOUTH ASIA
 - 43 SOUTHEAST ASIA
 - 44 NEAR EAST
- 50 OCEANIA

PART III - FIELDS OF INTEREST (FLD-INTR)

YOU MAY CHOOSE UP TO 20 FIELDS OF INTEREST. CHOOSE THE MOST SPECIFIC FIELDS THAT ARE LISTED IN WHICH YOUR INSTITUTION IS INTERESTED. WHEN YOU CHECK A SPECIFIC FIELD, YOU DO NOT NEED TO CHECK THE GENERAL CATEGORY OF WHICH IT IS A PART. IF YOUR INTERESTS DO COVER AN ENTIRE CATEGORY (BOLD FACE TYPE), CHECK THE LARGER CATEGORY.

- 010000 URBAN DEVELOPMENT
- 020000 ECONOMICS
 - 020100 PLANNING
 - 020101 COUNTRY
 - 020102 REGIONAL
 - 020103 SECTORAL
 - 020200 STATISTICAL ANALYSIS
 - 020300 TAXATION
 - 020400 RESOURCES ALLOCATION AND TRANSFERS
 - 020500 BUSINESS ADMINISTRATION
 - 020501 CREDIT
 - 020502 SMALL BUSINESS
 - 020503 MARKETING
 - 020600 PRODUCTIVITY
 - 020700 EMPLOYMENT
- 030000 DEVELOPMENT ADMINISTRATION
 - 030100 ORGANIZATION THEORY
 - 030200 TECHNICAL ASSISTANCE METHODOLOGY
 - 030300 DEVELOPMENT PROJECT PLANNING
 - 030301 PROJECT DESIGN
 - 030302 PROJECT IMPLEMENTATION AND MANAGEMENT
 - 030303 PROJECT EVALUATION
 - 030400 INSTITUTION BUILDING
 - 030500 LOCAL PARTICIPATION
 - 030600 PLANNING AND BUDGETING
 - 030700 LEGISLATION
- 040000 EDUCATION
 - 040100 EDUCATIONAL TECHNOLOGY
 - 040200 EDUCATIONAL ADMINISTRATION
 - 040300 NON-FORMAL EDUCATION
 - 040400 ADULT EDUCATION
 - 040500 INSTRUCTIONAL MATERIALS
 - 040600 FORMAL EDUCATION
 - 040601 PRE-SCHOOL AND ELEMENTARY
 - 040602 SECONDARY
 - 040603 HIGHER AND PROFESSIONAL
 - 040604 TECHNICAL AND VOCATIONAL
 - 040700 TEACHER EDUCATION
 - 040800 CURRICULUM DEVELOPMENT
- 050000 NUTRITION
 - 050100 CLINICAL STUDIES
 - 050200 FOOD TECHNOLOGY
 - 050300 PLANNING
 - 050400 NUTRITION EDUCATION
- 060000 MEDICINE AND PUBLIC HEALTH
 - 060100 DISEASE PREVENTION AND CONTROL
 - 060200 HEALTH PLANNING
 - 060300 HEALTH CARE DELIVERY SYSTEMS
 - 060400 SANITARY ENGINEERING
- 070000 POPULATION AND FAMILY PLANNING

PART III - FIELDS OF INTEREST (CONT'D)

- | | |
|---|---|
| <p>080000 <input type="checkbox"/> AGRICULTURE</p> <p>080100 <input type="checkbox"/> PLANT PRODUCTION AND BREEDING</p> <p>080110 <input type="checkbox"/> CEREAL CROPS</p> <p>080120 <input type="checkbox"/> SUGAR AND STARCH CROPS</p> <p>080130 <input type="checkbox"/> OIL CROPS</p> <p>080140 <input type="checkbox"/> FIBER CROPS</p> <p>080150 <input type="checkbox"/> FRUIT CROPS</p> <p>080160 <input type="checkbox"/> VEGETABLE CROPS</p> <p>080170 <input type="checkbox"/> PASTURE AND FEED CROPS</p> <p>080200 <input type="checkbox"/> SOIL SCIENCES AND FERTILIZERS</p> <p>080300 <input type="checkbox"/> WATER RESOURCES AND MANAGEMENT</p> <p>080400 <input type="checkbox"/> AQUACULTURE</p> <p>080500 <input type="checkbox"/> FARMING SYSTEMS</p> <p>080600 <input type="checkbox"/> AGRICULTURAL ECONOMICS</p> <p>080700 <input type="checkbox"/> PLANT PATHOLOGY AND PROTECTION</p> <p>080800 <input type="checkbox"/> ANIMAL PRODUCTION</p> <p>080900 <input type="checkbox"/> ANIMAL DISEASES AND PESTS</p> <p>081000 <input type="checkbox"/> FORESTRY</p> <p>081100 <input type="checkbox"/> AGRICULTURAL ENGINEERING</p>
<p>090000 <input type="checkbox"/> RURAL DEVELOPMENT</p>
<p>100000 <input type="checkbox"/> HOUSING</p>
<p>110000 <input type="checkbox"/> TRANSPORTATION</p> | <p>120000 <input type="checkbox"/> COMMUNICATIONS</p> <p>130000 <input type="checkbox"/> WOMEN</p> <p>140000 <input type="checkbox"/> YOUTH</p> <p>150000 <input type="checkbox"/> VOLUNTEERISM</p> <p>160000 <input type="checkbox"/> COOPERATIVES</p> <p>170000 <input type="checkbox"/> INTERMEDIATE/APPROPRIATE TECHNOLOGY</p> <p>180000 <input type="checkbox"/> INDUSTRIES AND INDUSTRIAL DEVELOPMENT</p> <p>190000 <input type="checkbox"/> ENVIRONMENT</p> <p>200000 <input type="checkbox"/> NATURAL RESOURCES</p> <p>210000 <input type="checkbox"/> ENERGY</p> <p>220000 <input type="checkbox"/> LAW</p> <p>230000 <input type="checkbox"/> LIBRARIES AND DOCUMENTATION SERVICES</p> <p>240000 <input type="checkbox"/> RESEARCH UTILIZATION</p> <p>250000 <input type="checkbox"/> TECHNOLOGY TRANSFER</p> |
|---|---|

REMEMBER: WE ARE INTERESTED IN KNOWING YOUR SPECIFIC INTERESTS

