SUMMARY REPORT ON MID-LEVEL MANAGEMENT INFORMATION SYSTEM NEEDS

Prepared for the Agency Task Force

on Information Resources

Prepared by: William H. Trayfors

June 1989

PN-ABS-674
IN 90557

CONTENTS

SUMMARY REPORT ON MID-LEVEL MIS NEEDS :

prepared for the Agency Task Force on Information Resources as mandated by the U.S. Office of Management and Budget

2

PURPOSE AND SCOPE

This study, undertaken pursuant to purchase order No. OTR-0000-0-00-9085-00 dated 4/28/89, focuses on information needs at the middle to upper levels of A.I.D. It is intended to assist in highlighting felt and unmet needs, as well as significant developments in the management of information throughout the Agency. Findings from this inquiry will contribute to a larger effort aimed at streamlining the Agency's command and control systems, i.e., the management structure and systems which modulate the Agency's work.

The scope of this study includes all parts of the AID/W organization. However, this can in no way be interpreted as an exhaustive, in-depth effort, given the time and resource limitations. Rather, it is a once-over-lightly attempt to sample the divergent views of AID's middle-level managers with respect to their current information needs, particularly as they are found wanting. While the views are often diverse, nevertheless there are several common themes expressed. This study attempts to draw these together and to summarize their implications for the improvement of AID's management information systems.

Methodology: This work draws both on a series of interviews with persons from all AID/W bureaus (see list of persons contacted in Appendix I) and upon the personal experience of the author during an AID career spanning some 23 years. Much of the latter included what might be called a sub-specialization or "hobby" interest in management information systems, the past 12 years of which has involved the application of microcomputer technology to AID's work overseas and in Washington.

A purposeful effort was made to identify and to interview persons within the Agency who have recent experience with microcomputer-based systems which appear to have broad application (see Appendix ___ for a brief description of some of these systems).

Additionally, effort was made during the present study to familiarize others with a few of the existing tools which could serve some of their MIS needs. For example, on a demonstration basis a series of microcomputer databases were installed in the ANE, PPC, and AFR bureaus. These databases build on AID "corporate" information downloaded from the AID mainframe computer. They provide quick access to obligations, expenditure, and pipeline information at the country, project, and subproject levels as well as the ability to rapidly graph this information.

Finally, a review was made of recent reports by outside contractors pertaining to various parts of the Agency's information system. Of particular relevance to this study were the Devres report done for the Africa Bureau in 1988 and the Information Strategy report done in 1988 for IRM by Booz, Allen, and Hamilton.

PRINCIPAL FINDINGS

POLICY, STRATEGIC, AND MANAGEMENT CONCERNS

NEED

There is wide agreement among A.I.D. officers on the need for agency-wide improvements in the management of both corporate and non-corporate data. No one seems to believe that the present situation is acceptable. Officers report their concerns about both their ability to access needed information quickly, and the quality of the data which are available. Quality, in this context, generally means accuracy and currency. There is wide understanding of the difficulty of obtaining high quality country-specific technical data (e.g., demographic, sectoral, macro- and micro-economic, etc.), but there is little patience expressed with respect to Agency-generated corporate data (e.g., budget, financial, personnel, project, contract).

While there is much disappointment about the present information environment in A.I.D., there is a growing realization that things could be different. Officers are no longer satisfied with the status quo: they are eager to move on to better information management techniques which will facilitate their work and which will help them do a better job. Many are aware of information systems both within and outside A.I.D. which could be helpful, if only they were available. Meanwhile, most officers continue their work in an information environment which nurtures conflict, suspicion, and inefficiency.

CUFF RECORDS

While many organizations sometimes employ "cuff records" (unofficial, individual, oft-secretive figures), A.I.D. over the years seems to have raised these to a practiced art. Since there are few officially designated and agreed-on budget or financial figures at any given point in time, the stage is set for players who would wish to gain advantage over other players to develop their own figures. These are regularly trotted out in meetings, with an uncann, timing intended to have the maximum impact. They may be used to argue for or against almost any allocation or reallocation decision, from overall country or regional levels to project levels, personnel assignments, strategic placement or withdrawal of missions, and a long list of other A.I.D. decisions. The last month of the fiscal year, September, brings on a new level of concentration on cuff records. Overseas phone calls, intra-Agency calls, visits, debate and an endless recalculation of obligations by project, sector, bureau, country, functional interest area, etc. are the order of the day. Everyone accuses everyone else of propagating a false "rackup" of

obligations. The game, however amusing to those not directly involved, has a purpose: there are OYB levels to be met by specified points in time AND, if the game is played well, there is often big money to be made, i.e., "fallout" funds to be obtained to raise bureau or country or project levels and to do things not otherwise possible.

Cuff records will be difficult, though not impossible to eliminate. The inefficiencies they bring about also bring, for a select few, increased discretionary power. Some who enjoy such momentary pleasures may resist the notion of there being just one official figure which is widely available within the Agency. Their voices will have to be stilled.

CORPORATE DATA

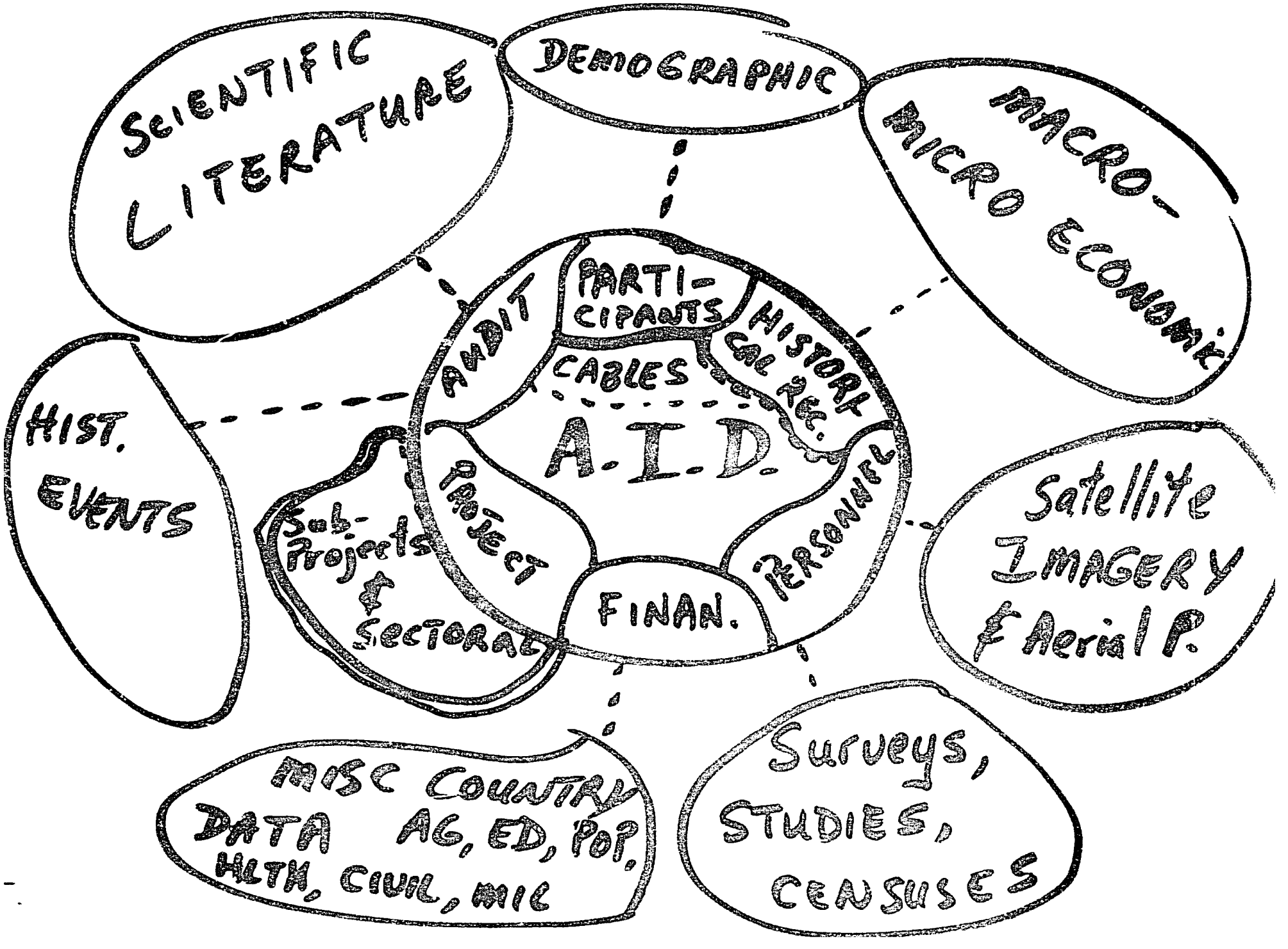
There is at present little agreement on the meaning of corporate data. There is also at present little understanding or agreement on the nature of electricity; however, we seem to have found ways to "define" and use it well. We need a working definition of corporate data, sanctioned by the corporation (A.I.D.), so that we can get on with the business of using it effectively.

The Agency's newly designated Data Administrator, Richard [illegible] has put forth the following definition of corporate and noncorporate data:

corporate data - data that affects the financial position of the Agency and is part of the permanent records of the organization; data that is mandatory to be maintained by the Agency officers to execute their custodial responsibilities; data on which routine or periodic management decisions are made.

noncorporate data - data that is developed from analytical work (private data) without adequate internal controls; transient or short-lived data used in studies; data obtained from openly published sources (public data).

Diagramatically, this rendition might appear as follows:


SCIENTIFIC LITERATURE
DEMOGRAPHIC
MACRO-MICRO ECONOMIC
HIST. EVENTS
AUDIT
PARTI-CIPANTS
HISTORICAL REC.
CABLES
A.I.D.
PROJECT
PERSONNEL
SUB-PROJECTS & SECTORAL
FINAN.
SATELLITE IMAGERY & AERIAL P.
MISC COUNTRY DATA AG, ED, POP, HLTH, CIVIL, MIL
SURVEYS, STUDIES, CENSUSES

CENTERS OF EXCELLENCE

AID/PRE

AID's private enterprise office, PRE, has developed a microcomputer-based information system designed to provide information on macroeconomic and trade statistics to businesses which might be interested in foreign investments. What is most interesting about the system is is very sophisticated interface with the user. Through clever programming and the use of off-the-shelf database and graphics tools, the system developer has provided an interactive shell which is most captivating. It uses attractive graphics menus and a mouse to permit any user to quickly obtain desired information on any country currently in the system. AID should look very carefully at this system, since it offers what could be a prototype for a "standardized" AID interface to be used for a wide range of corporate and non-corporate data. The appeal here is not only the slick user interface and the excellent graphics, but the speed with which a new user can understand and become proficient in accessing data using this type of approach. The system is reportedly based on dBase IV and Easel, and was developed by a hi-tech software firm in Boston at an attractively low cost. Those interested should contact Nancy Ellis or Vivian Anderson in PRE.

CM

In the Contracts Management office a small system was developed by an in-house programmer using dBase III+. This system is currently being used by 3-4 regional supervisors to keep track of procurement actions under their purview, permitting them to achieve a higher level of throughput and more effective planning and management of the contracts process. This system reportedly meets nearly 100% of the needs of those using it. However, it is based on standalone PCs (there being no real LAN installed in CM), thus limiting its potential for the sharing of information electronically. This small and efficient system is in the process of being replaced by a much larger system under development. The new system, CIMS, is designed to capture more information and to interface with the Agency's mainframe computer. CIMS will require significant on-the-job training for each contract officer, as data entry is to be done by everyone (irrespective of their typing or computer skills). It will be an interesting experiment to follow.

ANE/TR/ARD

Here is undoubtedly one of the 'thousand points of light'. Due to the computer passion and knowledge of the division chief, ANE/TR/ARD has achieved a high degree of computer integration into its daily work activities. Practically everyone in the

division has access to, and routinely uses microcomputers to improve their work output. A variety of hardware and software, acquired from several sources, has been successfully integrated into a functioning whole. ARD has developed a proprietary menu which greets the user on every machine, irrespective of its genre. Thus everyone in the division has a familiar entrypoint, no matter which machine he/she may be using at the time. Computers are heavily used for word processing, spreadsheets, graphics, and database management. At present, they are all linked through the Wang OIS system which permits the sharing of word processing documents, though not true information sharing as may be realized with a PC-based local area network (LAN).

AFR/TR

The technical resources office of the Africa Bureau makes extensive use of microcomputers and is on the doorstep of installing a LAN which will begin to link its many computers together. TR's use of micros for database management and for spreadsheets and graphics dates back some eight years. Some of the early work on project databases has been adopted by the Agency as a whole and continued through outside contracts (e.g, the Population Projects Database developed originally in AFR/DR/POP)

AFR/TR has pioneered in the use of computers for database management and for high-quality graphics, as well as in the use of microcomputers to manipulate data downloaded from the Agency's mainframe computer and from outside sources. Now, it would appear, they will be pioneering in the use of LAN technology within the Agency to link together a large number of microcomputers in order to facilitate the sharing of corporate and non-corporate data. The LAN is scheduled for installation in June 1989.

Price Williams & Associates

Under an earlier contract with AID's Africa Bureau (the Famine Early Warning System), PWA was contracted to carry out the analysis of data from such diverse sources as: newspapers, field worker reports, nutritional surveys, radio broadcasts, satellite imagery, other USG and international agency reports, host government documents, travellers, etc. In the process, PWA has made great strides in the use of modern information technology for storing, retrieving, analyzing, and reporting information. Of particular importance is the work they have done in satellite imagery processing and in the use of microcomputer-based geographic information systems (GIS). This work has significant potential for application to other arenas of A.I.D. activity, particulary natural resources management and overall AID country programming. Some of this work will be carried forward under the new FEWS project which is being implemented by Tulane University.

PPC/PB

Richard Diciurcio in PPC/PB has developed an interactive enquiry system which permits the user to query the Agency's mainframe computer and receive, in real time, the latest data on budgets, personnel, obligations, expenditures, etc. This is a prototype system which demonstrates the feasibility of interfacing directly with the mainframe computer, the Agency's repository of "corporate" data. While the system is not fast and probably not practical for a very large number of users (due to limited ports on the mainframe), it is an ingenious and elegant system for accessing useful data contained in a variety of databases on the mainframe computer. The Agency should undertake a serious development effort to expand the usefulness of this system.

LARGE SYSTEMS

A.I.D.'s experience with the development of large software systems has met with mixed results. Some, such as RAMPS and MACS seem to have been mostly positive. These systems, although limited in flexibility, seem to work pretty well and address key personnel and financial accounting problems in the Agency. Others, such as FACS and the LACMIS abortive effort, have been less successful if not downright disasters. Expensive ones at that!

An inherent problem in the development of large systems, apart from their high cost, is the very long development time required to scope out the problem, develop the code, test it, get everyone on board, install the code and any additional hardware required for data input or reporting and, finally, to get the whole system up and running. In the interim, changes may have taken place which render some of the original assumptions invalid and which may to some degree eclipse the newly born system. Further, should changes be required, they will be costly and time consuming.

Small systems, of course, must go through a similar process of development. The difference, however, is that all the elements are usually of a much smaller magnitude: cost, time to develop, time & ease of modification. A small database system required to capture key project or financial or contract data can actually be up and running in a few days. Modifications can be made quickly until the user interface is comfortable and until the system functions as desired.

These observations lead to a very important concept:

GIVEN A COMMON SET OF KEY DATA ITEM DEFINITIONS, DATA GENERATED BY A SMALL SYSTEM IS EXACTLY THE SAME AS DATA GENERATED BY A LARGE SYSTEM. THE COMPUTER REALLY DOESN'T CARE.

Example:

You want to develop a database consisting of names, addresses, and pertinent data on technical resource personnel -- potential contractors. You might take two approaches:

(1) modify an existing system on the mainframe, or develop a new one linked to some existing or future system; or

(2) using off-the-shelf software such as dBase or Condor or Paradox or Progress or any one of a dozen others, develop a database on a microcomputer (PC).

Time required for the first option could range up to several months or a year or more, depending on the complexity of the system to be modified, the availability of programmers, the

priority they assign to the task, etc.

Using the second option (microcomputers), you'd likely be up and running in 1-2 days. And, if you wanted to add or to modify the database structure after its initial development, this could be done in minutes, not months.

What about the output -- the data itself? IT WOULD BE EXACTLY THE SAME AS IF IT WERE GENERATED ON THE AGENCY MAINFRAME, AND COULD EASILY BE SHARED WITH THE MAINFRAME OR WITH OTHER SYSTEMS.

Perhaps more importantly, the dataset could be manipulated much more readily and rapidly on the PC: sorted, selected, reported, statistics run, etc.

If your PC-based consultant database were developed in a local area network (LAN) environment, IT WOULD BE IMMEDIATELY AVAILABLE TO EVERYONE ELSE ON THE LAN.

Bottom line: a corporate strategy for MIS enhancement based on small systems has much to recommend it. Large systems should be considered very carefully and only for a select few stable, core-of-the-core corporate data applications.

TOP-LEVEL SUPPORT

This may be hardest element of all to implement.

Top-level support can mean a lot of things. Let me try to clarify what is meant here.

Top-level support does not mean a passive blessing. Nor does it mean a periodic nudging or public show of support. It does mean:

- o intense, continuous, personal interest and involvement for a period of time sufficient to get the job done
- o decisiveness, discipline, and an authoritative approach to resolving certain key problems
- o not taking "no" for an answer
- o allocating sufficient human and financial resources to effect the desired changes
- o standing up to the AAs, Mission Directors, and other senior staff likely to put forth obstacles growing out of their parochial interests.

If past experience is a guide, this last point may require using up not a little political capital.

Although this seems somewhat alien to the way A.I.D. usually does business, it should be remembered that it is precisely the way A.I.D. usually does business that has fostered and nurtured the present chaotic situation.

If it is decided to proceed with a strategy something like the above, it will be important that whatever is to be "mandated" be carefully and thoroughly worked out beforehand, and that it be simple and direct. Above all, A.I.D. personnel are intelligent, serious folk who abhor organizational stupidity. The A.I.D. trail is littered with complicated, expensive, half-baked, and hare-brained schemes which didn't take.

DATA ACCESS, DATA INTEGRITY, AND DATA QUALITY

THE MAINFRAME

A.I.D.'s mainframe computer is the repository for Agency corporate financial, budget, program, project, personnel, and other data. The computer, recently relocated in suburban Maryland, is managed by SER/M/IRM. IRM and its contractors are responsible for maintaining the computer and its peripheral systems in operating order, as well as for the development of software required to store and retrieve Agency corporate information. Actual data input is usually the responsibility of users such as the various program offices, the personnel office, the financial management office, etc.

The mainframe can be likened to a very large filing cabinet, in which is stored a vast amount of information. Systems have been developed over the years to regulate the flow of information into and out of its many "drawers". Some of these work very well, some not so well. For the AID officer needing fast access to information currently stored on the mainframe computer, one can only wish him well. It's likely that the needed data is indeed in there somewhere, but the process of extraction often leads to distraction and extreme frustration. This situation comes about chiefly because of two problems: (1) lack of widespread physical and logical access; and (2) inherent problems in the logical structure and organization of the data themselves on the mainframe.

The first of these problems may actually be easier to solve than the second. Additional hardware and software protocols, coupled with modest training, could open up access to the mainframe data chest. Even better, local area networks (LANs) could be linked with the mainframe to facilitate rapid access to Agency corporate data. The MIDAS software, currently under development, has demonstrated the feasibility and simplicity of such an approach, since data from MACS can be routinely downloaded by MIDAS and automatically put into Lotus spreadsheets for individual project officers. THE ACCESS PROBLEM CAN, AND TO SOME EXTENT MAY ALREADY, BE SOLVED.

The second problem is more complex. It derives from years of inadequate systems discipline, i.e., from systems for data storage and retrieval being developed virtually independently. System A was developed to cram data into drawer number 2000 while, perhaps simultaneously, system B was being developed to cram data into drawer number 5000. Never mind that there may be some relationship between the two datasets...that, it was apparently concluded (assuming anyone thought about it), could be handled later. Rubbish. We now have conflicting and overlapping datasets with little commonality, inadequate data

definitions and, often, little ability to manipulate the datasets which have been developed. This is truly a problem for a DATA ADMINISTRATOR or DATA CZAR, and he better have the 100% full backing of the Agency Administrator himself and wear a blue suit with a big "S" on his chest. Where would he start? Well, the Chinese say that even the longest journey begins with a single step so he could start with a single step:

> ALL DATASETS CONTAINING COUNTRY NAMES WILL INCLUDE A FIELD WHICH IS 18 CHARACTERS IN LENGTH AND INCLUDES COUNTRY NAMES WHICH CONFORM PRECISELY TO THE FOLLOWING LIST OF OFFICIAL A.I.D. COUNTRY NAMES:
>
> AEPRP
> AFGHANISTAN
> AFR REGIONAL
> BENIN
> BOTSWANA
> C.A.R.
>
> ....etc.

With this simple step, country data in any database could be related electronically to country data in any other database. (The current country field in the OYB and OP databases is 40 characters long -- very wasteful -- and has the most incredible jumble of names you can imagine!)

This single step might lead logically to a second step:

> ALL DATASETS CONTAINING COUNTRY NAMES WILL INCLUDE A FIELD WHICH IS THREE CHARACTERS IN LENGTH AND WHICH INCLUDES THE A.I.D. OFFICIAL REGIONAL NAMES AS FOLLOWS:
>
> AFR
> ANE
> LAC
> S&T
> PPC
> PRE

... etc.
How about a third step:

> ALL DATASETS CONTAINING PROJECT NUMBERS WILL INCLUDE A FIELD WHICH IS NINE CHARACTERS LONG, THE FIRST SEVEN OF WHICH WILL CONTAIN THE OFFICIAL A.I.D. PROJECT NUMBER AND THE LAST TWO OF WHICH WILL INCLUDE THE SUBPROJECT OR PROJECT ELEMENT CODE, E.G.,
>
> 698042102

No ifs, ands, or buts. This is the way it will be, always and everywhere in the A.I.D. world. We don't care if the card only has 80 columns or if something else will be squeezed out. We really don't care if "it will take an enormous effort to modify

this database". Do it. Now.

DIVERSITY OF NEEDS AND EXPERIENCE

That A.I.D. officers differ widely in their knowledge of and experience with management information systems should not be surprising. However, a counter-intuitive finding of this study is that perceived needs for information differ also, even among sister offices in the several bureaus. One would expect the Agriculture Division in ANE to have similar data needs to those of the Agriculture Division in AFR or LAC. This, apparently, isn't necessarily so. AFR/TR is very much concerned and involved with budget and financial data: obligations, expenditures, and pipeline information. ANE/TR, by contrast, has much less interest in this type of information.

The lesson here would seem to be that corporate strategies must take account of differing information needs as well as differing levels of interest and experience among AID/W offices. Flexibility and adaptability are the byewords.

TRAINING

The nature and intensity of training required to open up access to the Agency's corporate data, as well as that much larger body of non-corporate data, will depend largely on the Agency's approach to a user interface. If off-the-shelf generic spreadsheet and database packages are to be used, together with dedicated systems such as MIDAS and CIMS, the training overhead will be quite large. Anyone wishing to access data will have to learn one or more of these systems.

It may be possible to flatten the learning curve smartly by adopting a standard A.I.D. user interface based on graphics and a mouse (see pp _____ and _____). This option should be carefully considered in adopting an overall Agency strategy.

A SHORT CORPORATE WISH LIST

CABLES

Cables are the lifeblood of Agency communications with its field missions. The technical system over which they are transmitted is impressive and efficient - worldwide. Unfortunately, the human part of the system in AID/W often renders the technology impotent.

Cables, both incoming and outgoing, often go astray..sometimes for weeks. If you're looking for an incoming cable which hasn't shown up as expected, you can't get a copy from the cable room unless you know the cable number, i.e., Kathmandu 01234. If you don't know the number and can't find a colleague somewhere who may have seen a copy, you'll have to call the mission in Kathmandu (this may take some time), get the cable number, go to the cable room with this number and obtain a copy of the cable.

For outgoing cables the same drill is required, unless you can locate a 'comeback copy'. Mid-level officers sometimes spend hours, yes hours, just trying to find out if a cable has actually gone out.

A.I.D. cables are all routed from the State system to an A.I.D. computer (REARCS). There, they are laser-printed and hard copies distributed. The computer software is very efficient for its intended purpose, but is very limited in its search and reporting capabilities. Thus, you can't find the cable you need unless you know its number.

Come on, folks. This is really silly.

A.I.D. needs to bite the bullet, get Xerox (who wrote and maintains the software) to modify the program so that daily listings can be generated which include:

Number	Date-time-group	Title
Kathmandu 01234	031234ZAUG89	Request for OE Allowance

These listings, including both incoming and outgoing traffic and sorted by post, should be made available to every office every day. They could even be made available in electronic form, put up on the Wang OIS equipment.

THE STAFFING PATTERN

A.I.D.'s staffing pattern is published monthly in three sections and distributed to office directors and assorted others. It is helpful, but perhaps wasteful. The printed listings are voluminous, hard to read, and cannot be manipulated to obtain answers to such frequently raised questions as:

Which BS50 officers are coming up for reassignment in the next 12 months?

What is our mix of backstops in the region?

Which ag officers do we have in the region? Which in XX region?

The staffing pattern should be made available in database form to all bureaus, so that these and other questions can be easily answered.

The manipulation of staffing pattern information is a key management tool for mid- and senior-level officers. This tool should be readily available.

Technically, this would be very easy to do. RAMPS can generate the needed output. Organizationally, it will be a bit more difficult, since to be useful the staffing pattern needs to be brought and kept up to date. The personnel office needs to ensure that personnel data are current.

CONGRESSIONAL QUERIES

Technical and program officers spend an inordinate amount of time tracing and responding to congressional queries. Often, the Agency embarrasses itself by responding differently to the same question asked at different points in time. LEG needs to develop a database of congressional queries and responses which can easily be searched by anyone needing that information. Very often, the originating officers (those who draft the responses) never see the actual response (which may have been changed), and thus are in the dark when the next query comes along.

CDIE AND THE OUTSIDE WORLD

AID/PPC/CDIE has two divisions: Evaluation (E) and Development Information (DI).

CDIE/DI has two subdivisions: SA or Statistical Analysis, and DI or Development Information.

The Statistical Analysis (SA) division maintains the Agency's database of historical trends macro-data. Housed on the IRM mainframe, the data are secondary - gathered from such sources as FAO, WHO, World Bank, USDA, UN, IFS, and GFS. This database contains economic, agriculture, and social data for the years 1960-1987.

In addition to maintaining the Agency's database, SA is responsible for the statistical component of the annual Congressional Presentation; answering requests for data within the Agency and the overseas Missions, other government agencies, and the public; and assisting Agency staff with data analysis. Data is presented in either hard copy or on computer diskette downloaded from the mainframe into LOTUS and tailored to the request. SA also has graph capability.

NOTE: From time to time SA has been detailed to work on "special" projects such as the "October Report" developed for the Administrator by PPC. This is regarded as data assistance.

Development Information (DI) maintains the Agency's library with a research division, and the Agency's publications repository. DI has its own mainframe (HP) containing non-statistical on-line Agency information. Project Identification Documents (PIDs), Project Papers (PPs), Project Implementation Reports (PIRs), Country Development Strategy Statements (CDSSs), special reports, evaluations, and other Agency publications are indexed and abstracted for Agency use.

As well as having access to the IRM and Bethesda mainframes, the research division within DI has the capability to retrieve on-line computer information outside the Agency through a subscription with DIALOGUE (commercial database language). Several hundred databases can be accessed. The research division is responsible for answering non-statistical information requests from the Agency and overseas Missions, other government agencies, and the public. (Special requests concerning non-statistical agriculture information are handled through a PASA with USDA.) In addition, the research division tracks special data information upon request on an ongoing basis (such as AIDS information for Bill Lyerly AFR/TR), and occasionally, compiles information for issuance of (synthesis) special reports.

Many technical, economic and other A.I.D. officers make daily use of data generated in the "outside world". These come from such diverse sources as the United Nations organizations, the World Bank, the Population Reference Bureau, host country official and

nonofficial organizations, other donors, the private sector, other USG agencies, etc. CDIE assists in accessing some of these data, while many parts of A.I.D. have made their own arrangements to access outside information. Microcomputers have greatly aided in this quest for better and more complete information. However, the methods currently in use are not as efficient as they could be, were there to be a unit within each Bureau (or even each office) tasked with managing key data.

MIS PRODUCTION CENTERS

There is an apparent need in the operating bureaus of AID/W for small management information analysis and production centers: centers which provide the bureaus with information services tailored to their individual needs. Functions of these centers could include:

- o access to and/or maintenance of databases required to support bureau operations
- o production of special reports, graphs, charts, maps, etc. to support bureau operations
- o technical support and training for bureau staff
- o limited technical support for field missions
- o liaison services with the outside world of data. private sector; IBRD; UN; other donors; AID contractors; dial-up services; etc.

Staffing might be best made up by a combination of bureau personnel plus a CDIE or IRM staffer plus contract personnel. Several bureaus already have contracted with other USG agencies or with private sources for MIS services to support specific offices. These include AFR/TR, S&T/POP, PRE, AFR/MDI and ANE/TR. The experience of these offices reportedly has been quite positive. To date there has been little direct coordination among these efforts. The Agency should consider means of exercising positive coordination of these and future efforts, meaning not control or supervision but rather assistance and suggestions (e.g., on data item names and definitions) which would permit the output of these systems to be easily linked with one another and with other Agency systems. An MIS production center in each bureau could help to exercise this valuable function.

For illustration only, the following estimate is given of the approximate cost of an MIS analysis and production facility per bureau.

SYSTEMS DEVELOPMENT AND ENHANCEMENT CONCERNS

THE PROMISE OF LOCAL AREA NETWORKS (LANs)

LANs, such as the Novell netware now being installed in AFR/MDI and AFR/TR, offer tremendous potential for improving connectivity and, the bottom line, productivity. Few A.I.D. officers have had direct experience with LANs and thus may be unaware of their capabilities.

LANs such as Novell function by using a dedicated microcomputer (usually a 80286 or 80386 machine) as a file server. All computers on the network are physically connected by wires to the file server. There are several different wiring systems possible, each with its own advantages and disadvantages.

The file server contains a large and very fast hard disk, often with 150 or even 300 megabyte capacity. On this disk are stored both programs (such as Lotus 123, Wordperfect, dBase, etc.) and the actual data generated by, or accessed by, these programs. When one of the terminals (PCs) on the network calls for a program or for data, these are served up very quickly by the file server, so quickly that in many cases the performance actually surpasses the speed of the PCs own hard disk! Data are then manipulated on the individual PCs and, when finished, are stored back on the file server. Data on the file server are backed up at frequent intervals by the designated system manager to avoid potential loss of data.

It is important to understand that data in the same database may be shared simultaneously by several persons on the network. For example, if six persons request information on obligations in Zaire at the same time, that information will be served up to all six, so that all six persons are looking at the same record at the same time. The same is true of graphics and spreadsheets and word processing documents. Note that the ability to call for and to view data on a network does not automatically give the user the right to change those data. In fact, data security concerns and protocols are handled in a sophisticated and elegant way on LANs such as Novell.

The ability to share information which is physically located on the network file server is very important to overcoming identified problems in the present A.I.D. environment, i.e., duff records. Imagine that we are now down the road about one year and for some time now the Agency Administrator and his senior staff have insisted on there being just one official source for obligations and expenditure data (perhaps MACS). They have insisted that every mission update MACS obligations data every day (whenever there is a new obligation) and that expenditure data be updated monthly. These data from MACS are assembled and stored on the AID mainframe computer. A system has been worked out to provide for daily downloading of obligations data from the mainframe (perhaps MIDAS) to local area networks in each bureau. Under this scenario, anyone needing current (or historical) data on obligations could access core Agency authoritative obligations

data easily and quickly from any terminal on the LAN. By quickly I mean within 10 seconds, not the many minutes required to await attachment to some external system and, by steps, eventually to reach the mainframe. BOTTOM LINE: THE TECHNOLOGY REQUIRED TO MAKE THIS SCENARIO A REALITY EXISTS TODAY. IT DOES NOT REQUIRE A LARGE SYSTEMS DEVELOPMENT EFFORT, NOR A COSTLY FEASIBILITY STUDY.

By extension, one can imagine that other Agency core information could also be made easily available. By steps, it would be possible within a year or two to make most essential core data widely and quickly available (financial, budget, personnel, project, etc.).

THE NEED FOR A STANDARDIZED USER INTERFACE

The proliferation of computer hardware and software can be mind boggling even to the computer affectionado. To those with little or no technical interest in computers, it can be a real turn off. In the AID environment we already have the omnipresent Wang word processing screens to which nearly everyone has at some point or another been introduced. Spreadsheets such as Lotus 123 offer yet another popular set of menus and instructions. Databases such as dBase or Condor have their own instruction sets and mysteries which go considerably beyond the interest and capabilities of most AID employees. Yet these tools offer tremendous potential to speed AID's work, if only there weren't so much to learn!

Enter the sophisticated user interface or "front end" such as that developed for PRE (see page). This system has taken what is basically a database application (foreign trade statistics) and wrapped it in an elegant, user-friendly shell. The result is so visually and logically appealing that anyone, with or without computer experience or typing skills, can quickly access the desired data.

I believe that a user interface of this type could very well serve as a prototype for access to Agency-wide core corporate data. That is, the Agency could decide, after some further investigation, to settle upon a standardized user interface for all its core data. If this were done, and if the interface were to be graphics and mouse-based such as the PRE system, much of the training overhead (and the time overhead to get up and running) would be greatly reduced. AID officers would be greeted with a familiar screen environment for access to data irrespective of their current assignments or interests. Cuff records would, in time, go by the boards thereby improving both Agency management practices and communication among its offices (since everyone would be working from the same set of basic data). This is doable. AID has 70-some overseas missions, only about 4000 employees, and a total of under 10000 projects on the books including historical ones. AID is not in the same league as DoD or NASA or TRW (with database records in some 100 million

persons). The overall size and scope of AID is such as to be readily adaptable to simple, proven information management techniques, many of them fortunately developed and paid for by agencies and organizations having vastly more complex problems. Basically, AID needs to keep track of its budget, its obligations and expenditures, its personnel, its projects and subprojects, and its special interests and concerns in terms of dollar allocations. That's not an unmanagable problem, nor does it call for mysterious or esoteric solutions. Common sense, a clear statement of purpose and strategy, and a sensible implementation plan -- all backed up by top-level AID managerial interest and determination -- should do the trick. Millions of dollars in consulting fees will not.

FUNCTIONAL ATTRIBUTION

When the Africa Bureau moved from a system of functional accounts (POP, HEALTH, AGRIC, EDUC, etc.) to the new single account, DFA, there ensued the immediate problem of functional attribution: how to keep track of monies obligated for agriculture, health, child survival, population, and the special concerns like WID, training, etc.?

The Africa Bureau did not handle this problem very well. At the program level, an attribution scheme was worked up overnight. It was unworkable. Modifications were made until deadlines were reached, and the attribution plan was implemented. It is less than satisfactory. At the technical level, AFR/TR worked up its own attribution system, since the Bureau system was insufficient to technical needs.

Over in PM, there was also inadequate preparedness for the new accounting system. DFA was a big headache.

As the Agency moves toward a overall accounts system similar to DFA in the next year or two -- assuming Congressional approval-- the functional attribution problem will take on new and larger dimensions. Someone needs to begin work NOW on the development of workable functional attribution systems which will serve both program and financial accounting needs.

APPENDIX I - LIST OF PERSONS CONTACTED

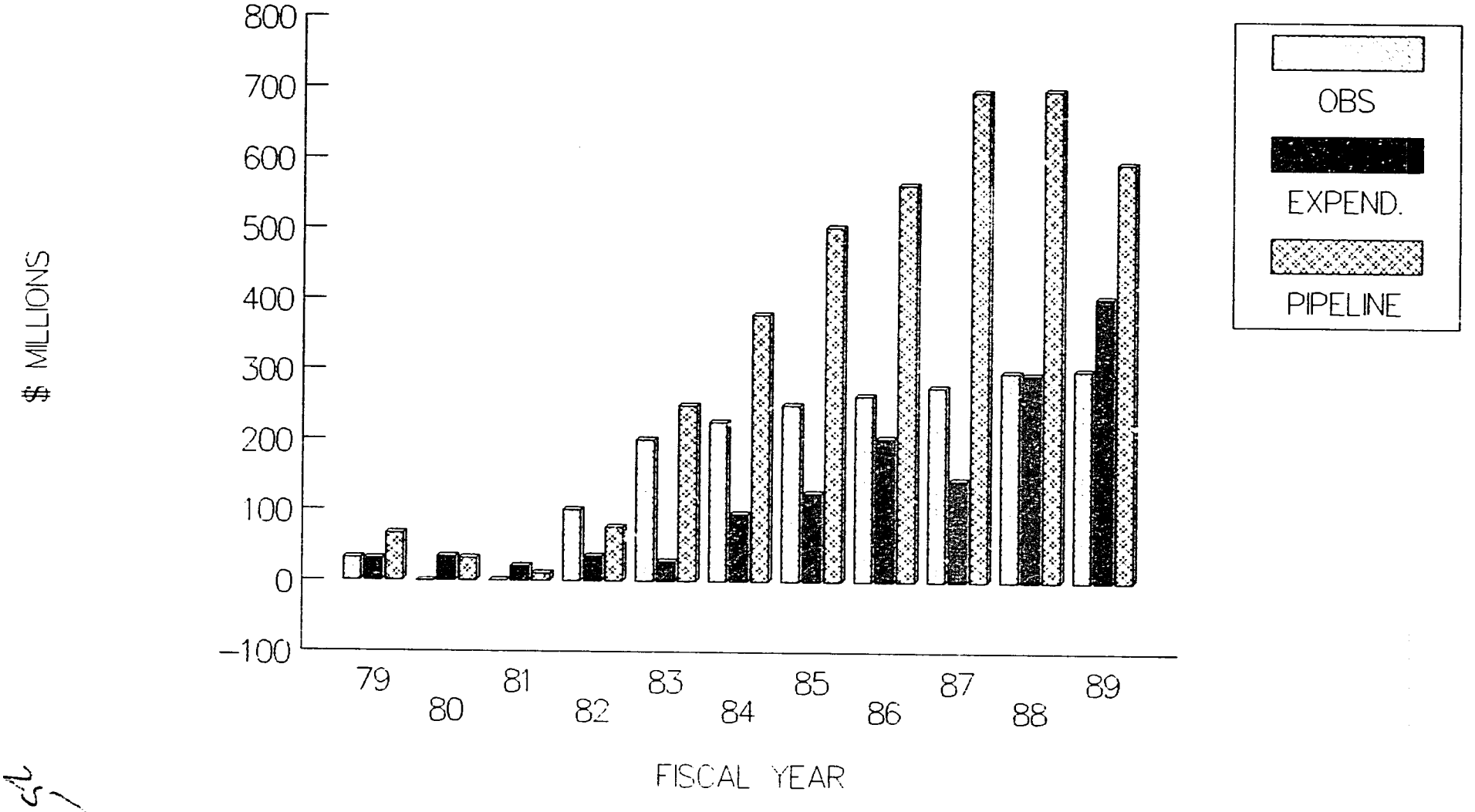
LAST	FIRST	ORGAN	ROOM	TEL
MARKEY	DAVID	PDC (NJ Group)		
ANDERSON	VIVIAN	PRE	5752 NS	202-647-0353
BLUMBERG	ROBERT	ANE/TR/ARD CONTR.	4440 NS	202-647-7365
BOWERS	GERRY	LAC/DR	2248 NS	202-647-9145
BUGG	SUSAN	ANE/PD	3320A NS	202-647-1761
CREAN	TIM	M/SER/IRM		
DICIURCIO	RICHARD	PPC/PB	33 NS	202-647-6619
DOYLE	MICHAEL	AA/MGT		202-647-
ECKERSLY	LOC	FM	802 SA-2	202-663-2201
ELDRIDGE	CAROLYN	CM	1522 SA-14	703-875-1122
ELLIS	NANCY	PRE	5889 NS	202-647-0353
GIBSON	PATRICIA SUE	ANE/TR	4720 NS	202-647-8940
HEFFERN	JOE	M/SER/IRM		
JAMES	JOHN PAUL	ST/POP/FPSD		
KENEFICK	FRANCIS J	PPC/PB	3756 NS	202-647-6686
LAUER	DENNIS	AFR/MGT/MISR	2641 NS	202-647-7194
LOWENTHAL	JAMES	ANE/TR/ASD	4440 NS	202-647-7365
MACKENZIE	BUFF	AFR/TR/PRC		703-235-
MERRITT	GARY	AFR/TR/HPN		
MEYER	RICHARD	RETIRED EXECSEC		703-243-1070
ODELL	BRUCE	ANE	3319 NS	202-647-0064
PASKAR	JOANNE	ANE	NS	202-647-
POMAR	MARIA ELENA	USDA/ERS	13th & NY	202-786-1705
SPISHAK	PAUL	M/SER/IRM	1100A SA14	703-875-1326
THOMAS	JOHN H	LAC/DR		

APPENDIX II

SAMPLE QUERIES AND REPORTS FROM AFR/TR SYSTEM

PAKISTAN TOTAL ASSISTANCE FY79–89

OBLIGATIONS, EXPENDITURES, PIPELINE



HOW MANY PERSONS HAS CATHOLIC RELIEF SERVICES BENEFITTED SINCE 1985 UNDER PL480?

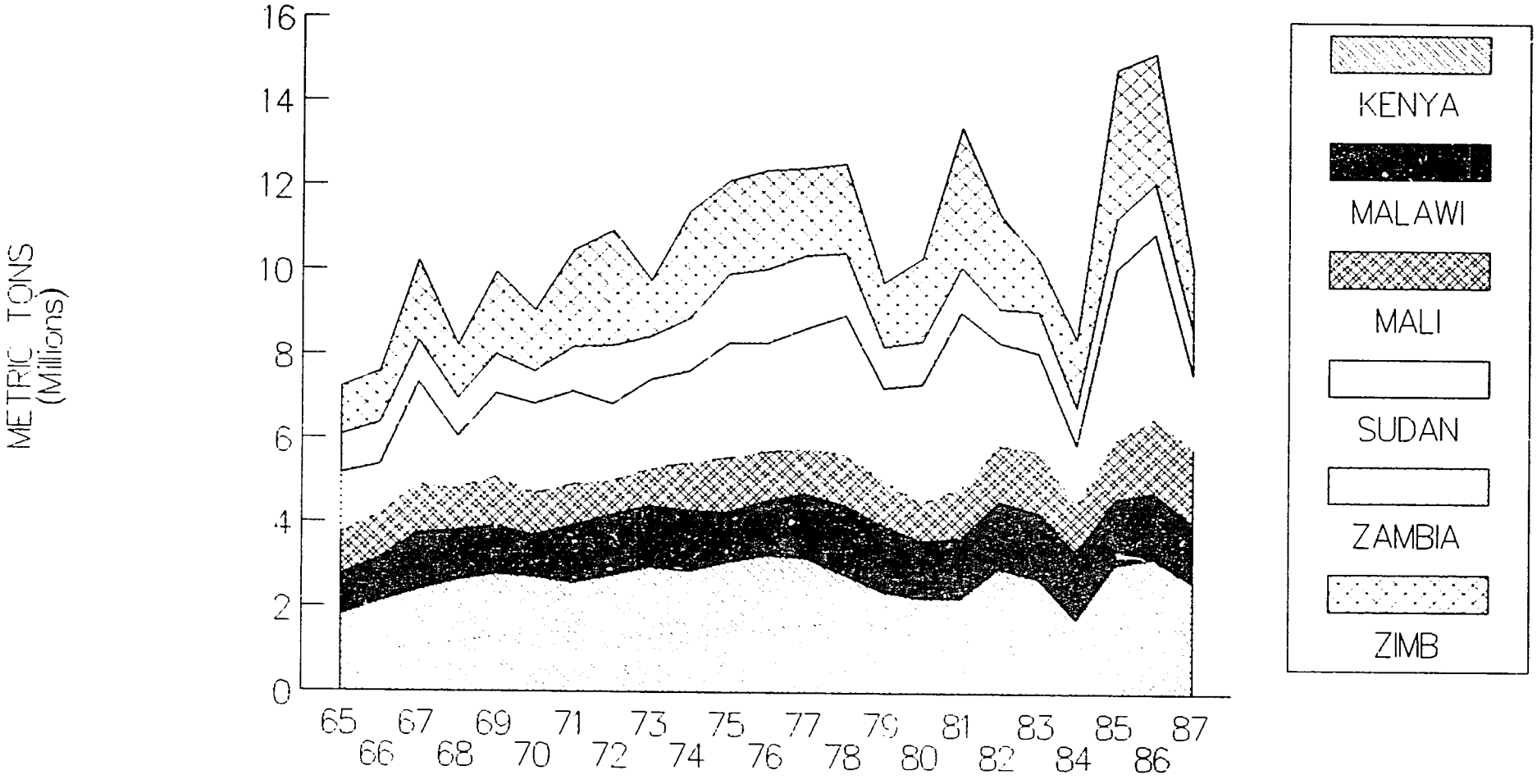
COUNTRY	YEAR	RECIPIENTS	EMERGENCY	DISASTER	REFUGEE
Benin	1985	40.0	.0	.0	.0
Benin	1986	49.0	.0	.0	.0
Burkina	1985	941.0	505.0	505.0	.0
Burkina	1986	466.0	.0	.0	.0
Burundi	1985	88.0	.0	.0	.0
Burundi	1986	93.0	.0	.0	.0
Djibouti	1985	39.8	5.0	.0	5.0
Ethiopia	1985	2166.4	1962.4	1962.4	.0
Ethiopia	1986	1249.7	1045.7	1045.7	.0
Gambia	1985	33.5	.0	.0	.0
Gambia	1986	41.5	.0	.0	.0
Ghana	1985	260.0	.0	.0	.0
Ghana	1986	309.1	.0	.0	.0
Kenya	1985	260.5	105.0	105.0	.0
Kenya	1986	148.0	.0	.0	.0
Lesotho	1985	408.5	207.5	207.5	.0
Lesotho	1986	197.0	.0	.0	.0
Madagascar	1985	81.0	.0	.0	.0
Madagascar	1986	100.0	.0	.0	.0
Mauritania	1985	152.3	72.6	72.6	.0
Mauritania	1986	86.1	.0	.0	.0
Rwanda	1985	208.0	90.0	90.0	.0
Rwanda	1986	142.3	.0	.0	.0
Senegal	1985	325.6	63.6	63.6	.0
Senegal	1986	214.5	.0	.0	.0
Seychelles	1985	24.3	.0	.0	.0
Seychelles	1986	24.3	.0	.0	.0
Sierra Leone	1985	82.0	.0	.0	.0
Sierra Leone	1986	64.0	.0	.0	.0
Tanzania	1985	656.5	580.0	580.0	.0
Tanzania	1986	74.8	.0	.0	.0
Togo	1985	96.0	.0	.0	.0
Togo	1986	112.0	.0	.0	.0
Zimbabwe	1985	89.2	89.2	89.2	.0
Total		9323.9	4726.0	4721.0	5.0
Minimum		24.3	.0	.0	.0
Maximum		2166.4	1962.4	1962.4	5.0
Average		274.2	139.0	138.8	.1

HOW MUCH OF OUR PL480 ASSISTANCE TO MOZAMBIQUE HAS BEEN EMERGENCY ASSISTANCE?

COUNTRY	YEAR	AGENCY	RECIPIENTS	EMERGENCY	DISASTER	REFUGEE
Mozambique	1977	GTG	215.0	215.0	180.0	35.0
Mozambique	1977	WFP	355.0	355.0	.0	355.0
Mozambique	1978	GTG	696.4	696.4	661.4	35.0
Mozambique	1978	WFP	212.3	212.3	.0	212.3
Mozambique	1979	GTG	278.0	278.0	218.0	60.0
Mozambique	1979	WFP	100.0	100.0	.0	100.0
Mozambique	1980	GTG	160.0	160.0	.0	160.0
Mozambique	1980	WFP	477.3	477.3	400.0	77.3
Mozambique	1981	WFP	60.0	.0	.0	.0
Mozambique	1982	GTG	1000.0	1000.0	1000.0	.0
Mozambique	1982	WFP	27.0	.0	.0	.0
Mozambique	1983	GTG	2600.0	2600.0	2600.0	.0
Mozambique	1984	GTG	751.0	751.0	751.0	.0
Mozambique	1985	CWS	33.5	33.5	33.5	.0
Mozambique	1985	GTG	196.0	196.0	196.0	.0
Mozambique	1985	WFP	76.6	76.6	76.6	.0
Mozambique	1985	WYRO	125.0	125.0	125.0	.0
Mozambique	1986	CWS	25.0	25.0	25.0	.0
Mozambique	1986	GTG	2146.0	2146.0	2146.0	.0
Mozambique	1986	WFP	76.6	76.6	76.6	.0
Mozambique	1986	WYRO	240.0	240.0	240.0	.0
	Country total-->		9850.7	9763.7	8729.1	1034.6
	Grand total---->		9850.7	9763.7	8729.1	1034.6

CEREALS PRODUCTION 6 COUNTRIES

FY1965–1987 FAO DATA



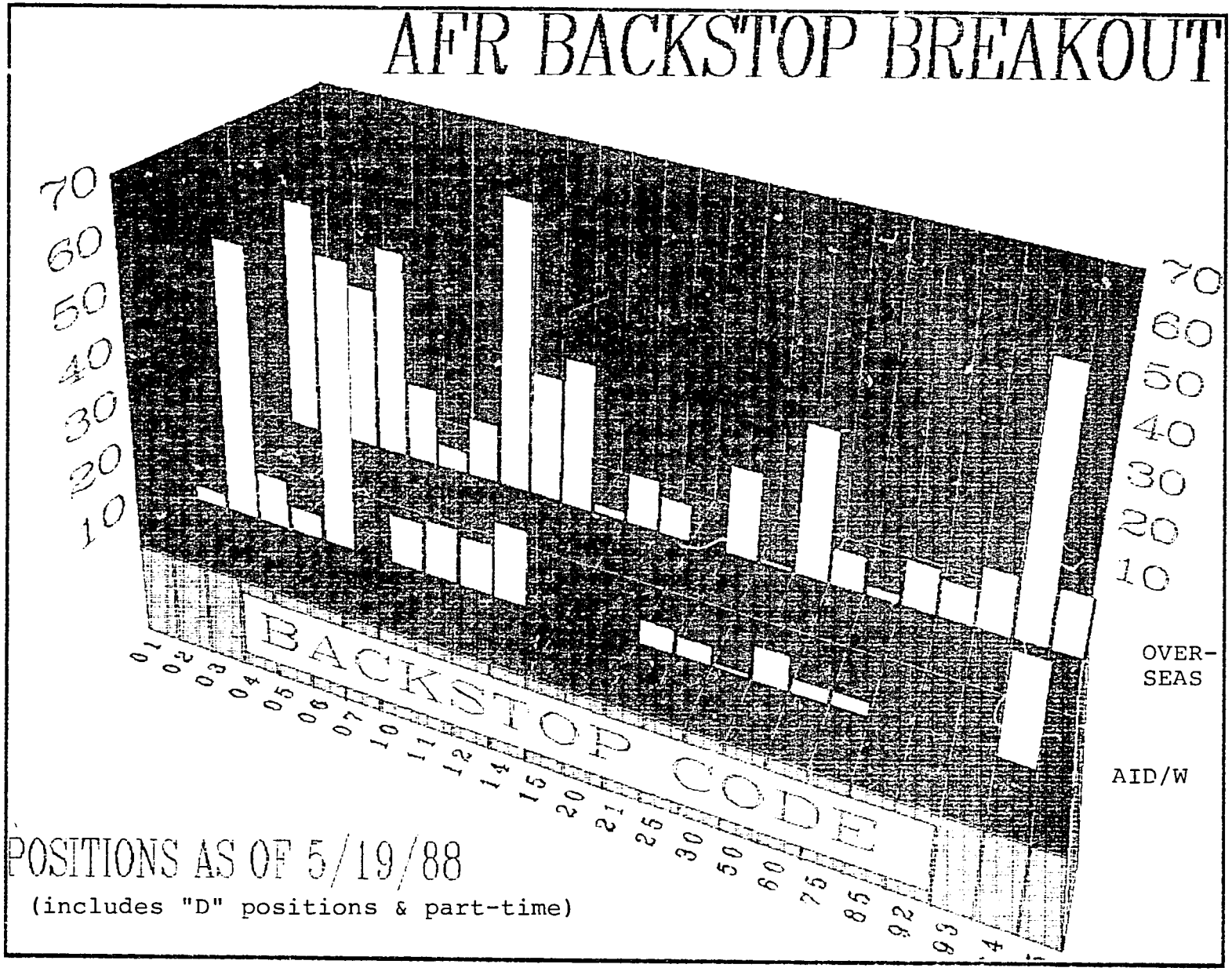
WHAT FISHERIES PROJECTS HAVE WE BEEN INVOLVED IN?

COUNTRY	PROJ#	GL	BEG	END	TITLE	APPN	AUTHLOP	PLANLOP
DJIBOUTI	6030003	G	79	84	FISHERIES DEVELOPMENT I	DR	55	55
DJIBOUTI	6030003	G	79	84	FISHERIES DEVELOPMENT I	ES	1199	1199
DJIBOUTI	6030003	G	79	84	FISHERIES DEVELOPMENT I	FN	978	978
DJIBOUTI	6030015	G	84	86	FISHERIES DEVELOPMENT PHASE II	ES	3298	3298
MALAWI	6120217	G	85	87	COMMERCIAL FISHERIES DEVELOPMENT	FN	0	5000
SAHEL REG.	6250009	G	81	84	SAHEL REG TRAINING FOR INLAND FISHERIES	SH	0	2200
CAMEROON	6310022	G	80	83	SMALL FARMER FISH PRODUCTION	FN	858	597
CAPE VERDE	6350012	G	83	86	INTEGRATED FISHERY DEVELOPMENT AND PROD	SH	0	6500
GUINEA-BISSAU	6370006	G	79	79	SMALL SCALE FISHERIES	FN	500	500
ZAIRE	6600050	G			FISHING COOPERTIVE EXPANSION	SA	0	0
ZAIRE	6600090	G	78	78	FISH CULTURE EXPANSION	ES	464	464
ZAIRE	6600090	G	79	85	FISH CULTURE EXPANSION	FN	1186	1186
ZAIRE	6600080	G	78	88	FISH CULTURE EXPANSION	SS	2140	2140
CAR	6760004	G	79	79	FISH CULTURE EXTENSION	DR	118	118
CAR	6760019	G	86	86	COMMERCIAL FISH CULTURE	FN	0	200
SENEGAL	6850240	G	79	79	LOWLAND FISHERIES-(AIP)	SH	180	180
SENEGAL	6850254	G	81	81	FISHERIES RESOURCE ASSESSMENT	SH	150	150
MALI	6880220	G	79	81	SAN PILOT FISH PRODUCTION (PVO)	SH	323	323
BURUNDI	6950102	G			HIGHLAND FISHERIES DEVELOPMENT	FN	0	0
RWANDA	6960112	G	81	82	FISH CULTURE	FN	2470	2450
Total							13919	27538
Minimum							0	0
Maximum							3298	6500
Average							695	1376

GIVE ME A RUNDOWN ON RECENT-YEAR OBS AND EXPENDITURES FOR ROAD PROJECTS

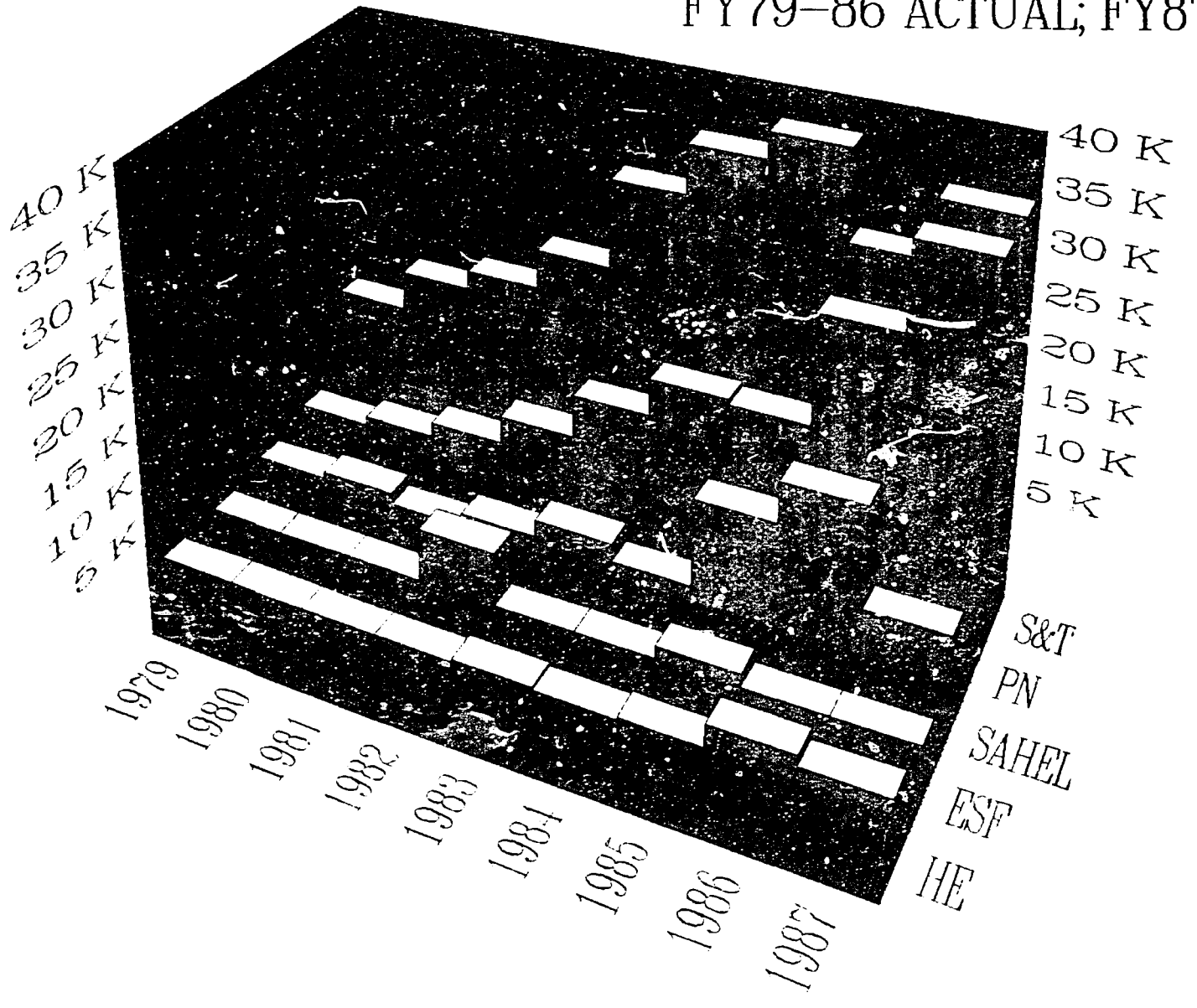
COUNTRY	PROJ#	TITLE	FY87OBL	FY86OBL	FY85OBL	FY84OBL	FY87EXP	FY86EXP	FY85EXP	FY84EXP
KENYA	6150168	RURAL ROADS SYSTEMS	0	0	0	0	0	0	1	205
KENYA	6150168	RURAL ROADS SYSTEMS	0	0	0	0	0	0	0	7105
KENYA	6150170	ROADS GRAVELLING	0	0	0	0	0	0	0	0
KENYA	6150170	ROADS GRAVELLING	0	0	0	0	0	0	0	0
KENYA	6150191	ASAL ROADS NETWORK	0	0	0	0	0	0	0	0
KENYA	6150191	ASAL ROADS NETWORK	0	0	0	0	0	0	0	0
SAHEL REG.	6250534	LAKE CHAD TWO ROADS LINK	0	0	0	0	0	0	0	0
SAHEL REG.	6250714	PARAKOU-MALANVILLE ROAD	0	0	0	0	0	0	0	0
SAHEL REG.	6250805	ROAD MAINTENANCE	0	0	0	0	0	0	0	0
CAMEROON	6310011	TRANSCAMEROON RAILROAD III	0	0	0	0	0	0	0	0
BOTSWANA	6330006	BOTSWANA-ZAMBIA ROAD	0	0	0	0	0	0	0	0
BOTSWANA	6330072	BOTSWANA-ZAMBIA ROAD	0	0	0	0	0	0	0	369
BOTSWANA	6330072	BOTSWANA-ZAMBIA ROAD	0	0	0	0	0	0	0	0
GAMBIA	6350206	RURAL ROADS MAINTENANCE SYSTEMS	0	0	0	0	269	2061	1108	1902
SIERRA LEONE	6360111	RURAL ROADS II-CARE(PVO)	0	0	0	0	0	0	10	0
SUDAN	6500036	SOUTHERN ACCESS ROAD	0	0	0	0	86	277	627	2049
SUDAN	6500943	SOUTHERN ROAD MAINTENANCE REHAB.	0	0	0	0	243	389	2822	102
SUDAN	6500069	W. SUDAN AG MARKETING ROAD	0	23456	20863	15681	479	170	19	0
ZAIRE	6600115	SHABA REFUGEE ROADS	0	0	0	0	0	0	0	0
ZAIRE	6600115	SHABA REFUGEE ROADS	0	0	0	0	0	0	0	0
LIBERIA	6690138	RURAL ROADS PHASE III	0	0	0	0	0	0	0	5
LIBERIA	6690143	ROAD MAINTENACE EQUIPMENT	0	0	0	0	0	0	0	0
LIBERIA	6690200	RURAL ROAD MAINTENANCE	533	2767	1000	0	719	491	0	0
CHAD	6770032	CHAD ROAD MAINTENANCE	0	0	0	0	0	0	0	5
CHAD	6770050	STRENGTHENING ROAD MAINTENANCE	4750	2519	5000	0	4064	173	0	0
CHAD	6770050	STRENGTHENING ROAD MAINTENANCE	0	0	0	0	0	0	0	0
CHAD	6770050	STRENGTHENING ROAD MAINTENANCE	0	0	5000	0	1145	591	0	0
CHAD	6770050	STRENGTHENING ROAD MAINTENANCE	0	0	0	0	0	0	0	0
MAURITANIA	6820214	RURAL ROADS IMPROVEMENT	0	0	6000	481	1495	2172	1795	2355
NIGER	6830190	ROAD MAINTENANCE	0	0	0	0	0	0	0	0
NIGER	6830231	NIGER FEEDER ROADS	0	0	0	0	0	0	0	0
BURKINA	6860215	EASTERN ORD RURAL ROADS	0	0	0	0	0	0	0	0
BURKINA	6860215	EASTERN ORD RURAL ROADS	0	0	0	0	0	0	0	0
BURKINA	6860247	RURAL ROADS II	0	0	0	0	0	0	0	0
MALI	6880212	NAYES-NIORO ROAD	0	0	0	0	0	0	0	0
SA REGIONAL	6900006	MALAWI ROADS II	0	0	0	0	0	0	0	0
SA REGIONAL	6900046	MALAWI ROADS PHASE II	0	0	0	0	0	0	0	0
SA REGIONAL	6900076	SOUTHERN PERIMETER ROAD	0	0	0	0	0	0	764	4411
SA REGIONAL	6900076	SOUTHERN PERIMETER ROAD	0	0	0	0	1286	1873	1493	1971
SA REGIONAL	6900234	IMPROV BLANTYRE-TETE-HARARE ROAD	0	200	0	500	200	72	328	100
BURUNDI	6950108	RURAL ROAD (ROUTE 84)	0	0	0	0	0	0	144	419
BURUNDI	6950112	RURAL ROADS II	0	0	246	0	13	432	562	62
BURUNDI	6950114	RURAL ROADS III	0	0	0	0	0	0	0	0

CAN YOU GIVE ME A BREAKOUT OF ALL AFRICA BUREAU POSITIONS BY BACKSTOP, OVERSEAS & AID/W?



POP FUNDING IN AFRICA

FY79–86 ACTUAL; FY87 EST



20 July 1989

AID/PFM/FM/WAOD
Room 103, SA-2
Washington, D. C. 20523-0204

Dear Sir/Madam:

In compliance with the terms of the attached purchase order (#OTR-000-0-00-9085-00, dated April 28, 1989), payment is requested in the amount of $6,300. No other invoice will be submitted.

Please note also that my permanent address is as follows:

William H. Trayfors
[redacted]

This is the same address shown on my SELs when I was directly employed by A.I.D., and should be used for tax reporting purposes since I pay taxes to the Virgin Islands.

I request that payment be made in the form of a deposit to my bank in Washington, D. C.. The account information is:

[redacted]

Thank you.

Sincerely,

William H. Trayfors

CONSULTING SERVICES

ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 7 PAGES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER	2. CONTRACT NO. (If any)	3. ORDER NO.	4. REQUISITION/REFERENCE NO.
4/28/89	OTR-0000-0-00-9085-00		

5. ISSUING OFFICE (Address correspondence to)
Agency for International Development
OP/W/MS, Room 1522, SA-14
Washington, D.C. 20523

6. SHIP TO: (Consignee and address, ZIP Code)
ANE/PD, Bruce Odell
Room 3319, New State
Washington, D.C. 20523

SHIP VIA:

7. TO: CONTRACTOR (Name, address and ZIP Code)

[redacted]

8. TYPE OF ORDER

[X] A. PURCHASE — Reference your _____

Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheets, if any, including delivery as indicated. This purchase is negotiated under authority of:

[ ] B. DELIVERY — Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA
Appropriation: 72-1191000
B.P.C.: COEA-89-10001-V959
PIO/T: 9001511 O/C 259

10. REQUISITIONING OFFICE
D/REG

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[X] SMALL [ ] OTHER THAN SMALL [ ] DISADVANTAGED [ ] WOMEN-OWNED

12. F.O.B. POINT	14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	16. DISCOUNT TERMS
N/A	N/A	See block 17.	N/A

13. PLACE OF INSPECTION AND ACCEPTANCE
See block 17.

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	The purpose of this Purchase Order is to contract with William H. Trayfors to prepare a summary-type report on (1) information needs at the bureau operating officer level, and (2) comments/suggestions on hardware, software, data access, networking and training, to be included within the Agency's overall Task Force study of information resources, as mandated by the U.S.G. Office of Management and Budget.					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.		17(H). TOT. (Cont. pages)
	N/A	N/A	N/A	$6,300	
	21. MAIL INVOICE TO: (Include ZIP Code) AID/PFM/FM/WAOD, Room 103, SA-2, Washington, D.C. 20523-0204			$6,300	17(I). GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature) C R Eldridge

23. NAME (Typed)
CAROLYN R. ELDRIDGE
TITLE: CONTRACTING/ORDERING OFFICER

NSN 7540-01-152-8083 50347-101

OPTIONAL FORM 347 (10-83)
Prescribed by GSA
FAR (48 CFR) 53.213(e)

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
4/28/89	OTR-0000-0-00-9085-00	

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	The requested report shall briefly summarize: (1) the contractor's interviews with Agency managers and technical personnel, as appropriate, in the Regional and Central bureaus, as to their near and intermediate term operational information management needs, and (2) the contractor's conclusions as to the most appropriate methods for satisfying those needs. Comments, discussion, and/or recommendations may cover the following kinds of issues, e.g.: - Information requirements for operating and technical personnel; - Agency information strategy and policies affecting operations-level systems, data, and staff functions; - techniques and barriers/facilitations for data generation, administration, maintenance, and user access; - systems, hardware, software, and networking communications capacities and improved configurations/ arrangements of existing equipment and assets; and					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
4/28/89	OTR-0000-0-00-9085-00	

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)

- Refinement options: internal/external assistance, management's role, staff development, cost and implementation issues/alternatives.

Suggestions and comments may also be made about study areas or operations that affect information resources management and/or "systems" improvements, even though such may not come directly under the purview of MIS concerns.

ESTIMATED START DATE:

o/a April 27, 1989

DELIVERY SCHEDULE:

The draft report (2 copies) will be delivered to Mr. Bruce Odell, ANE/PD, Room 3319 New State, 21st and Virginia Ave., N.W. for Agency review and consideration o/a May 21, 1989.

The final report (2 copies) will be submitted to Mr. Bruce Odell, ANE/PD, Room 3319 New State, 21st and Virginia Ave., N.W. for review and acceptance within one week after receiving the Agency's comments on the draft report.

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
4/28/89	OTR-0000-0-00-9085-00	

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)

IMPLEMENTATION AND COORDINATION:

The Contractor shall review Agency materials on information need and strategies on automation and information management and, as appropriate, interview Agency staff in AID/W Bureau operating offices. If available, the contractor will also consult with a sampling of field mission personnel who happen to be in Washington to get their views of operating and information needs. Access to Agency materials and facilities will be provided or arranged as needed by the Contract-designated Project Officer and/or staff of the Agency's Operations Improvement (Koehring) Task Force. Technical direction will be provided as needed by PPC and/or SER/IRM offices.

Questions concerning the purpose and content of this Purchase Order will be handled by the Contracting Officer designated in Block 23 hereof.

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
4/28/89	OTR-0000-0-00-9085-00	

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)

PAYMENT SCHEDULE:

Upon receipt and acceptance by A.I.D. of the work ser forth herin, the Contractor shall be paid the FIRM FIXED PRICE OF $6,300.

Upon receipt and acceptance by A.I.D. of the draft report, the Contractor shall be paid $3,150.

Upon receipt and acceptance by A.I.D. of the final report, the Contractor shall be paid $3,150.

NOTE:

The above rate is contingent upon the Contractor performing 20 person-days of effort at a fixed daily rate of $300.25, which represents a daily salary rate of $294 + daily travel costs of $6.25; clerical costs are figured at $295. Should the Contractor provide less than 20 days level of effort, then the amount specified herein shall be reduced by $300.25 for each day not worked.

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
4/28/89	OTR-0000-0-00-9085-00	

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)

PAYMENT PROCEDURES

1. Payment to the Contractor will be made upon receipt and acceptance of the deliverable end item(s).

2. To receive timely payment, Contractor should follow the instructions in the "NOTE" on the reverse side of the SF 347. All claims for payment must be sent directly to the paying office designated in Block 21 of the SF 347.

3. Payment will be made as close as possible but not later than the 30th calendar day, if the designated paying office is in the United States, or the 45th calendar day, if the designated paying office is outside the United States, after the designated paying office has received a proper invoice from the Contractor.

4. The payment date is the date placed on the United States Treasury check at the time of issuance by the disbursing office, or with transfer made -- not the date of actual receipt of the check in the mail.

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
4/28/89	OTR-0000-0-00-9085-00	

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)

ADDITIONAL CLAUSES

The following clauses are added to those shown on the reverse of the cover page of this purchase order:

(1) FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

52.203-07	Anti-Kickback Procedures (OCT 1988)
52.232-25	Prompt Payment (FEB 1988)
52.243-07	Notification of Changes (APR 1984).
52.246-02	Inspection of Supplies - Fixed Price (APR. 1984)
52.246-04	Inspection of Services - Fixed Price (APR 1984)
52.249-14	Excusable Delays (APR 1984)

NOTES REGARDING CLAUSES ON REVERSE OF PURCHASE ORDER

1. Variation in Quantity does not apply to this order.

2. Contract Work Hours and Safety Standards Act - Overtime Compensation - General (Apr 1984) has been updated to the March 1986 version.

3. Discounts for Prompt Payment (Apr 1984) clause has been updated to the July 1985 version.

4. Changes - Fixed Price (Apr 1984) clause has been updated to the August 1987 version.

(2) A.I.D. ACQUISITION REGULATION (48 CFR CHAPTER 7) CLAUSES

752.202, ALT. 70	Definitions (APR 1984)
752.7001	Biographical Data (APR 1984)
752.7005	Language, Weights, and Measures (APR 1984)
752.7006	Notices (APR 1984)
752.7008	Use of Government Facilities or Personnel (APR 1984)
752.7020	Organizational Conflicts of Interest (MAR 1985)
752.7025	Approvals (APR 1984)
752.7026, ALT. 71	Reports (APR 1984)

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

INSTRUCTIONS FOR ACCESSING MAINFRAME COUNTRY & PROJECT DATA

INTRODUCTION

This is intended to help you quickly obtain information on OBLIGATIONS, EXPENDITURES, and PIPELINE for any country or any project or subproject in the A.I.D. world. This information is available by fiscal year from approximately FY 1980 to FY90. Data are downloaded periodically from several different databases on A.I.D.'s mainframe computer:

- o current year COUNTRY and PROJECT level data are from the OYB database maintained by each Bureau's DP office
- o historical data at the COUNTRY and PROJECT level are from the CP database maintained by PPC
- o future year COUNTRY and PROJECT level data are from another CP database also maintained by PPC
- o all SUBPROJECT level data are from the PAIS database maintained by FM.

It is important to note that COUNTRY and PROJECT level data (contained respectively in the RICH and the MFDTA89 databases) include both project and non-project figures. Data at the SUBPROJECT level (contained in the SUBPROJ database and downloaded from FM's PAIS database) include ONLY PROJECT INFORMATION.

ACCESSING THE DATA

All data mentioned above are contained in three microcomputer databases designed to be run with the relational database program CONDOR (similar to dBase III+). These three databases are:

Database	Description	Source
RICH	Country-level project & nonproject data	OYB,CP
MFDTA89	Project-level project & nonproject data	OYB,CP
SUBPROJ	Subproject-level project data only	PAIS

Data for any country, project, or subproject may be obtained very quickly using simple CONDOR commands. Additionally, macros have been written to allow the desired data to be AUTOMATICALLY GRAPHED, using an interface with the powerful spreadsheet program, Quattro. Below are several examples to get you started.

EXAMPLE ONE: COUNTRY-LEVEL DATA

PROBLEM: You want to graph the data for one or more countries, say Thailand.

PROCEDURE: From the DOS prompt C> , simply type C (ENTER). Wait a few seconds. A list of countries will appear in a box on the right side of the screen. Use the down arrow or pagedown keys to select the desired country. When Thailand is highlighted, press ENTER. Now look at the instructions at the bottom of the screen. You have three options:

ALT-O to graph country-level obligations, by DA and ESF

ALT-P to graph country-level obligations, expenditures, and pipeline

or

ALT-C to select another country.

Press ALT-P. The graph appears automatically. If you want to add the country name, press SPACEBAR T 1 then type THAILAND (ENTER) and press V to see the result. If you want to print the graph, press ESC ESC ESC P G and the graph will be printed on your printer.

This simple procedure will work for any single country, one at a time.

To exit the graphing program, press ESC ESC ESC / Q Y

EXAMPLE TWO: COUNTRY-LEVEL DATA (NO GRAPHS)

PROBLEM: You wish to see the historical record for Bangladesh.

PROCEDURE: You're going to access the data for Bangladesh, using CONDOR, and accessing the microcomputer database named RICH. Here we go.

Type ABC (ENTER) to get into CONDOR. You should now see the prompt, C>> .

Type DISPLAY RICH ST COUNTRY IS BANGLADESH (ENTER)

Within a second or two you will see the data for Bangladesh displayed on your screen. The statement above is a simple query statement for CONDOR. The structure for any query is always the same, i.e., COMMAND (in this case DISPLAY) DATABASE (in this case, RICH) and any condition(s) (in this case, ST meaning 'so that' COUNTRY is BANGLADESH). Note that the first word in the condition statement MUST be the name of a data field, in this case COUNTRY. Now, type E (ENTER) to get back to the Condor prompt C>>.

Wow, maybe now you can begin to see the power of a microcomputer database. Let's say you want to see only countries which have obligated more than ten million dollars in FY88. The command would be:

DISPLAY RICH ST FY88OBL GT 10000 (ENTER)

This command would cause each country which obligated more than ten million dollars in FY1988 to be displayed on the screen, one after the other. Press N to see the next record, then N again to see each successive record. Press E (ENTER) to exit. Neat, you say, but how about a simple report or listing?

Type H (for help) RICH (ENTER). A menu will appear. Choose the #2 option to do a report to the screen. CONDOR will ask you if you want to select all records. Answer N (for no). CONDOR will then prompt you for the search criteria, i.e., for the criteria by which records should be selected from the entire database into your report. Type FY88OBL GT 0 (ENTER). Press N. A listing will then be produced of all countries which obligated more than ten million dollars in FY88. Press CTRL-S to stop the listing, CTRL-Q to restart. When finished, press (ENTER) (ENTER) 5 (ENTER).

CONDOR is a very powerful relational database. It is well worthwhile to spend some time learning its command structure so you can be proficient in getting just the data you need in a very short time.

Let's do one more example before we go on. Say you want to know what fisheries projects have ever been done in the Africa region. Since we're looking for project-level data, we could use either the MFDTA89 database or the SUBPROJ database which would give us a finer cut at the subproject level. The command to search for such projects and to list them to the screen is as follows:

LIST SUBPROJ WHERE TITLE IS *FISH* *AQUA* BY COUNTRY PROJ# TITLE FY84OBL FY85OBL FY86OBL FY87OBL FY88OBL FY89OBL (ENTER)

The star before and after the words "fish" and "aqua" will allow CONDOR to select any project which has the letters "fish" or "aqua" anywhere in the title.

This operation would take you about 30 seconds, and you would have a complete listing of all fish projects in the region.
In the next section, we'll cover a number of simple CONDOR command statements which will give you the ability to manipulate data easily.

EXAMPLE THREE: SAMPLE CONDOR COMMAND STATEMENTS

PROBLEM: You wish to access selected data from the three databases RICH, MFDTA89, and SUBPROJ which contain country-level, project-level, and subproject-level data respectively.

PROCEDURE: Try the following commands and see what flexibility you have in manipulating data.

```
LIST RICH  WHERE REGION  IS ANE AND FY89OBL GT 0 BY COUNTRY TITLE
FY89OBL @ TOT FY89OBL (ENTER)


STAX RICH WHERE REGION IS AFR BY FY85OBL FY86OBL FY87OBL FY88OBL
FY89OBL (ENTER)


REPORT RICH WHERE FY89OBL GT 20000 [L]  (ENTER)


H SUB (ENTER)
1     (ENTER)
PROJ# IS 6980421* (ENTER)
N
N
N
N
E
(ENTER)
5
(ENTER)


DISPLAY SUBPROJ ST PROJ# IS 6980421* (ENTER)
N
N
N
E
(ENTER)
```

```
H SUB (ENTER)
4
(ENTER)
N
PROJ# IS 6980421*   (ENTER)
N                              - WAIT...IT TAKES AWHILE! WAIT UNTIL
                                 THE TOTALS ARE LISTED AT THE BOTTOM
                                 OF THE REPORT AND THE HARD DISK
                                 LIGHT GOES OUT
(ENTER)
(ENTER)
5
(ENTER)


RUN SUB
6980421*  (ENTER)               - WAIT A FEW SECONDS UNTIL YOU ARE
                                 RETURNED TO DOS PROMPT, THEN..

SUB (ENTER)                    - YOU WILL SEE ALL 49 SUBPROJECTS
                                 AUTOMATICALLY GRAPHED
TO ADD A TITLE...

ESC
T
1
PROJECT 698-0421 (ENTER)
V

TO GET OUT OF THE GRAPH...


ESC ESC ESC ESC
/ Q Y


TO GET BACK TO CONDOR...

ABC (ENTER)

H RICH  (ENTER)

1 (ENTER)
COUNTRY IS EGYPT (ENTER)
N
E (ENTER)
5


SYS  (ENTER)
```

```
C  (ENTER)
                USE ARROW KEYS TO HIGHLIGHT DESIRED COUNTRY
(ENTER)
ALT-P       HOLD DOWN THE ALT KEY (2ND KEY ON WANGS) AND PRESS P)
ESC ESC ESC
ALT-C
                USE ARROW KEYS TO SELECT ANOTHER COUNTRY
(ENTER)
ALT-O       THAT'S O NOT ZERO
ESC ESC ESC
/ Q Y
```

That's enough for now. Additional exercises forthcoming! Have fun.