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EXECUTIVE SUMMARY

STUDY OF AUTOMATED SYSTEMS FOR AGENCY-WIDE PROCESSING (PROJECT ASAP)

Agency for International Development

Washington, D.C.

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EXECUTIVE SUMMARY

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AID requires large amounts of information and generates massive amounts of paper to plan, program, finance, and implement assistance programs throughout the world. Present methods of handling this large volume of information and paper are largely antiquated and consume major amounts of staff time. When professional staff must spend inordinate amounts of time proofreading and correcting typed products, when secretaries must retype the same document many times, and when project teams and review teams are delayed because information and reports are tied up in transmission or reproduction, the work of the Agency suffers.

These problems can be solved by office automation technology and they must be solved if the Agency is to be able to manage increases in program appropriations with no additional or even fewer staff. For these reasons, Project ASAP was formed.

This document summarizes two reports developed under this project. The first is a Final Report that presents the study's findings, conclusions and recommendations. The

SER/DM
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PROJECT ASAP
(OFFICE AUTOMATION)
QUESTIONS & ANSWERS

1. Q. Is there a genuine need for office automation in AID?

1. A. There is if we relate "need" to the growing demand from AID program managers for automation equipment and services. For example,

--In the FY 81 ABS Submissions, 7 USAIDs requested funds to acquire mini-computers;

--During the past 6 months the number of word processing devices in use in AID/W has grown from 69 to 95;

--The demand for both data processing and word processing has occurred spontaneously. The SER Bureau's basic posture during the past six months has been to "cool it" until AID has a better handle on its overall requirements and a consistent plan for the use of modern information processing technology.

2. Q. Why concentrate on the program management area, i.e. PID/PPs, ABS, CDSS, CP, etc.?

2. A. For several reasons:

--These core activities constitute an integral part of AID's substantive program. Improved productivity and efficiency in these areas relate directly to AID activities in the field. They offer the greatest potential for improved support to USAIDs, Geographic Bureaus, and other program management functions in AID.

--The Plan contemplates installation and use of information processing equipment at both ends, i.e. in USAIDs as well as in AID/Washington. Therefore, the Plan has a definite field orientation rather than being exclusively AID/Washington related.

--Paperwork processing in these program management areas has heretofore received virtually none of AID's automation resources. Two years ago, the information function in Regional Bureaus and USAIDs was found to be quite primitive (Babb Report). Project ASAP offers an opportunity to allocate more of AID's automation resources to areas which have not previously benefited from automation.

--The cost of performing these program processing functions--$62,000,000+ annually--is significant enough to warrant a major investment.

3. Q. Why should ASAP be limited to program-related paperwork?

3. A. There is no such limitation. Once installed, the equipment is available for any AID use, e.g. preparation of memoranda, distribution of such memos or other documents prepared in electronic format, Congressional mail, Executive Correspondence, etc.

4. Q. Isn't this just another grandiose automated system which will never work?

4. A. It is a system in terms of the explicit goal of eventually creating a planned network of compatible equipment which will enable USAIDs and AID Bureaus/Offices to (1) facilitate the processing of their paperwork as well as (2) adding another dimension, i.e. communications, to their paper-processing capabilities. It should be noted that:

--any word processing equipment to be installed under ASAP will have the same capabilities to handle local work as equipment currently in use. The communications aspects of the Plan expand the capabilities for use of these devices by linking them into a planned network.

--some benefits will be available in the short-term, e.g. within 6 to 12 months; the system is not dependent upon some future date when all potential users are linked;

-- the voluntary aspects to the implementation plan leave the majority of AID offices free to decide whether or not to participate.

5. Q. Isn't the installation of such sophisticated equipment overseas rather chancy?

5. A. There is nothing new about installing automated equipment overseas. Such equipment currently shows up in many of the loan and grant activities which AID funds. A large-scale computer was installed and in use 12 years ago in what was then AID's largest Mission (Vietnam). Technological change since then have made such equipment much smaller in size, less expensive, and easier to maintain.

6. Q. How can AID assure equipment compatibility and adequate local maintenance if the Agency begins to install this equipment in the field?

6. A. By joining forces with State and ICA. These agencies are moving aggressively to install such equipment at many overseas locations. Two new contracts were put in place in 1979, both with a single vendor (Wang). These contracts provide for a range of mini-computers and word processors available for installation overseas with maintenance support provided under the same two contracts. Penalty clauses (e.g. $100 per day, per machine) provide incentives for the vendor to keep the equipment running.

6. A. (CON'T) The Foreign Affairs agencies have considerable leverage because of the size of these two world-wide contracts. In the event of local problems at individual missions, AID/W is in a better position to support the field by dealing directly with the vendor's Headquarters management. In the event of equipment failure overseas, use of similar equipment by multiple agencies at the same post provides some degree of local equipment redundancy.

7. Q. How closely do potential field requirements match the overseas locations already scheduled for automation by State and ICA?

7. A. There is a very close correlation between State/ICA's current plans and AID's potential requirements. Among 72 AID posts, State/ICA are already planning to install mini-computers and/or word processors at 46, approximately two thirds of AID current posts. In some areas, e.g. Asia and the Near East, automation equipment to be installed by State/ICA cover 90% of the posts where USAIDs are located.

8. Q. What happens to those AID posts where automated equipment cannot be installed?

8. A. The list of posts is still somewhat tentative and there is at least a chance that the number of posts can be expanded to include additional AID posts. This would be subject to State/ICA agreement and negotiation with the vendor. At this point, we are not ruling out any AID posts. However, it is likely that there will be an irreducible minimum of 10 to 20 posts which will be beyond automated assistance for the next five years. For such posts, the Plan proposes a more modest step which should provide some indirect benefits for such missions in terms of facilitating the processing of paperwork which they must submit to AID/W.

9. Q. How would this be done?

9. A. By providing a specified type font for use in the USAID's electric typewriters in preparation of PIDs, PPs, etc. These documents will still have to be submitted to AID/W in hard copy format. However, the copy can be fed into an OCR scanner which can convert the entire document into electronic format. This would enable its handling, distribution, revision, storage, and use by AID/W Bureaus and Offices in the same manner as if it had originated in another USAID after having been prepared on a word-processing machine.

10. Q. Are State and ICA ahead of AID in terms of use of office automation at overseas locations?

10. A. At this point, the answer is yes. Project ASAP provides a basis for AID to catch up. AID's paperwork is certainly as important as that in State and ICA and our interest in productivity and efficiency just as great. Unlike State and ICA, AID's program related paperwork is characterized by significant program dollar amounts associated with documents such as PIDs, PPs, etc.

second is a five-year, strategic plan for expanding the use of office automation throughout the Agency.

I. AID INFORMATION PROCESSING NEEDS WERE ANALYZED

1. FIVE AGENCY PROCESSES WERE SELECTED FOR STUDY BY PROJECT ASAP

Five processes, involving the majority of AID/W offices and almost all USAIDs, were selected for study. They are:

- Project Identification Document/Project Paper process
- Annual Budget Submission process
- Congressional Presentation process
- Project Implementation Order process for technical services and commodities
- Non-project assistance process.

These processes were analyzed to determine the extent to which office automation technology could be utilized and would make significant improvements in efficiency or effectiveness. The analyses focused on aspects of the processes that were characterized by:

- High work load volume
- Repetitive work steps
- Need for information
- Time constraints.

Over 100 staff members from offices in Washington, Cairo and Nairobi participated in study interviews.

Other processes, e.g., those associated with administrative and management activities, were briefly reviewed to provide an overview of Agency-wide automation requirements. Findings and conclusions, however, are limited to the selected study processes.

2. THERE IS A WIDE RANGE OF TECHNOLOGIES AND EQUIPMENT AVAILABLE TO AID

Automation technology available to support office processes are diverse and rapidly proliferating. Usually, the equipment is classified into the following categories:

- Word processing
- Data processing
- Telecommunications.

Attachment A of this summary contains the definitions of the categories that were used throughout the study.

3. OFFICE AUTOMATION WILL IMPROVE PRODUCTIVITY IN THE PROCESSES STUDIED

In each of the five processes examined, work activities and information handling can be improved through the use of office automation technology. Specifically, by applying automation AID can:

- Increase staff productivity with word-processing. Experience indicates that AID can look forward to the following typical productivity increases through the use of word processing equipment:
  - 30-50 percent for clerical staff
  - 5-10 percent for professional staff.
- Reduce information processing and document production delays.
- Increase efficiency and work quality.
- Increase staff effectiveness by permitting direct communication and coordination among multiple offices.
- Increase responsiveness of USAIDs and AID/W to information and action requests.

Exhibit I, following this page, summarizes a few of the specific benefits that office automation will create for each of the five processes studied.

In Attachment B, the PID/PP process is used to illustrate more fully the benefits that will be derived from office automation.

4. ONLY A WELL-PLANNED PROGRAM CAN ENSURE THAT THE BENEFITS ARE FULLY REALIZED

The analysis confirmed that office automation presents an opportunity for AID to obtain major productivity and communications benefits. In order to fully realize these benefits, the Agency should take the following actions:

- Implement automation simultaneously in AID/W and the field; not one before the other

EXHIBIT I (1)

Major Areas Where Office Automation Can Improve the Study Processes

PROCESS	MAJOR AREAS OF IMPROVEMENT	BENEFITS FROM AUTOMATION
CDSS	Annual update and revision of the CDSS is time-consuming for professional and clerical staff in the mission.	Word processing equipment which stores the CDSS will: . Reduce the time professionals devote to revision and update . Reduce the amount of clerical labor devoted to retyping original and revised text. Compatible word processing equipment in the missions and AID/W offices permits the missions to send only revisions to AID/W where they may be incorporated into the stored text for production of the complete revised CDSS.
ABS	The transmission of hard copy ABS material from the missions to AID/W and the reproduction and distribution of the Country ABS in AID/W can involve substantial time delays which reduce available review time in AID/W.	More time can be devoted to review of Country ABSs with more efficient reproduction and distribution capabilities in AID/W. Data processing applications can provide rapid data manipulation and scenario-testing to support budgetary decision making. Word processing will: . Reduce the amount of clerical labor devoted to completely retyping draft budgets . Produce more efficiently error-free final copy. ABS data stored in electronic form can be efficiently used as a basis for an Agency-wide operating year budget system and for preparation of ABS briefing and supporting documents.
CP	Project activity sheets are prepared as fresh copy in the missions, although the information is similar to that in the ABS process. Frequent, time-consuming revisions of the main volume and annexes of the CP are made by multiple review offices.	Mission work time in preparing CP inputs can be reduced through access to stored and easily retrievable background information. Word processing equipment will reduce professional and clerical time in AID/W in preparing CP drafts and their revisions. Interconnected word processing units and other communications devices will rapidly transmit draft CP copies among reviewing offices.
PID/PP	Preparation of PIDs and PPs requires access to information which is not always readily available to design teams in the field. Multiple drafts are time-consuming for support staff, involve major proofreading time by professionals, and can result in error-filled products. Transmission of PIDs and PP from the mission to AID/W and their reproduction and distribution in AID/W can involve substantial time delays which reduce available review time.	Ready access to data bases could ease project design, reduce time searching for supporting information, and reduce time for staff to gain familiarity with a program or country requirements. Word processing equipment will significantly reduce the professional and clerical labor absorbed by multiple drafts of the PIDs, PPs and their supporting documents. A longer range benefit of telecommunications support is an ability to achieve same day transmission of the PIDs and PPs, as well as comments and revisions between AID/W and the field, thus reducing delays in review and response to inquiries.

EXHIBIT I (2)

Major Areas Where Office Automation Can Improve the Study Processes

PROCESS	MAJOR AREAS OF IMPROVEMENT	BENEFITS FROM AUTOMATION
PIO/T & C	Transmissions of PIO materials from the missions to AID/W can involve delays. The missions and regional and central bureaus cannot easily monitor the status of processing activities.	Word processing units with contract writing programs in SER/COM and SER/CM will quickly produce error-free standard contracts. Data processing mini-computers will provide extensive scheduling, monitoring and problem identification capabilities in the field and in AID/W. Telecommunications could make the process more effective by permitting the missions to review and comment upon proposals and contracts before the AID/W offices make final determinations.
Non-Project Assistance	This process involves a large volume of information which must be: . Rapidly exchanged not only among AID offices but other parties in host countries and the United States . Monitored and updated frequently.	Data processing applications can provide monitoring capability. Telecommunications equipment will rapidly transmit the information and documents and increase the responsiveness of AID offices.

- Establish equipment compatibility standards to make sure that the equipment can be interconnected
- Become actively involved in the State Department's telecommunications enhancement efforts and consider evaluating several commercial vendors from a cost/benefit perspective
- Implement management controls to ensure that the office automation plan is well executed and that the equipment is well utilized.

The latter action is discussed more fully below.

(1) Clear Objectives Governing the Use of Automation Should Be Developed

As staff productivity increases to allow the same amount of work to be done in less time, some individuals may choose to spend their newly-freed time improving product quality or generating additional information requirements of marginal utility. To achieve the best use of the technology, the Agency must clearly define office automation objectives and develop a plan to capture the desired benefits. In some cases, quality improvement will be an appropriate use of the available time. In other instances, more benefit would accrue if staff turned their attention to other tasks. AID can decide to use the technology to:

- Hold current workload constant and reduce number of staff assigned to a process

- Hold current workload constant and improve product quality
- Hold staffing levels constant and increase workload.

No matter which objectives (or combinations of objectives) are chosen, AID managers need to establish a central authority to guide technology use. Guidelines and controls will help assure that the implementation is well planned and well executed and that the anticipated benefits are realized.

(2) Orientation and Follow-Up Training Are Necessary

Office automation technology affects more than typing—its capabilities mandate changes in office workflow and procedures. Clerical staff need training in the equipment's capabilities and use if productivity gains are going to be realized.

To do this, AID must establish formal internal training programs. These can be a combination of vendor-provided and internally-generated programs. The ultimate goal of the training should be to produce thoroughly-versed equipment operators who feel comfortable with the system and can take full advantage of its features. The professional staff also need training on the equipment's capabilities, and on how work procedures must change in order to maximize its benefits.

The training program will be a critical element in the success of office automation in AID. It represents a commitment to staff training heretofore not undertaken by the Agency. Without comprehensive and continued training to keep clerical and professional staff abreast of new equipment and enhanced features, the AID office automation program will risk not achieving its full potential and under-utilizing its productivity capabilities.

(3) During the Transition, Disruptions in Office Procedures Will Occur

Good planning can smooth the transition from manual to automated offices, but some disruption while new procedures are implemented is probably inevitable. Careful supervision from AID management, good training and technical assistance can minimize disruptions and prevent disruptions from lasting beyond the introductory period.

(4) New Procedures Must Be Designed to Guide Coordinated Equipment Use

Equipment installation alone will not realize automation's benefits. AID managers must develop methods and procedures to coordinate information flows among offices. For example, in the CP process, the regional bureau managers must determine which

offices will receive field inputs on word processing units, how many draft copies will be distributed to which staff, and which word processing unit will store draft CP materials forwarded to LEG for review.

Office automation technology is one of several techniques AID managers can use to improve operational efficiency and effectiveness. The introduction of the technology offers AID management an opportunity to critically examine information requirements, work loads and procedures used in program processes.

A summary of major findings and conclusions is presented in Exhibit II, following this page.

II. A FIVE-YEAR, MODULAR IMPLEMENTATION PLAN ALLOWS CONTROLLED TECHNOLOGY INTRODUCTION

A technology-implementation plan is laid out in the second Project ASAP document which provides a carefully designed means of introducing the office automation equipment, procedures and training.

During the information gathering and analysis phase described in the Final Report, the Booz, Allen team presented AID with three implementation strategies. One of these, as described in the section below, served as the basis for the Five-Year Office Automation Plan.

EXHIBIT II

Major Findings and Overall Conclusions

	FINDINGS	OVERALL CONCLUSIONS
1.	AID's processing requirements and work flow meet generally used criteria for identifying opportunities for office automation	Application of expanded office automation support in AID can be expected to: . Increase staff productivity . Reduce delays in processing . Permit direct communication . Increase responsiveness
2.	Previous experience with office automation in other agencies has resulted in immediate improvements in paper handling capabilities.	There is potential for substantial near-term improvement in clerical productivity and communications and longer-term increases in professional productivity.
3.	The Agency's current experience with the full range of office automation technology and its attendant benefits is limited.	The introduction of expanded office automation capabilities will result in: . Additional staff training requirements . Disruption in routine office activities . Changes in clerical staff mix
4.	The development of an extensive network of interconnected equipment is an essential prerequisite to increasing the efficiency and the effectiveness of the study process.	The Agency must develop and enforce equipment compatibility standards. Office automation must be introduced simultaneously in Washington and field locations if maximum benefits are to be achieved. AID must continue to actively consider and respond to State's expanded programs in telecommunications and cable distribution. AID can experiment with additional telecommunications support from commerical vendors to test its feasibility and costs.
5.	AID/W offices and USAIDs are expanding their use and reliance upon office automation technology.	AID managers must control the expanded use of office automation to minimize disruptions and to assure that this new resource is well-utilized and that its potential benefits are realized.
6.	Current responsibilities over office automation support activities are shared by SER/DM and SER/MO.	The introduction of expanded automation requires a single management group to exercise central leadership and a single point for coordination.

1. AID CHOSE THE STRATEGIC ALTERNATIVE THAT INCLUDES RAPID IMPLEMENTATION OF A LARGE-SCALE INTEGRATED OFFICE AUTOMATION SYSTEM

As described fully in the Final Report, the implementation strategy chosen will:

- Provide a system configuration to support the Agency-wide Plan
- Recommend a major investment in equipment which will be rapidly installed in appropriate Agency locations
- Provide flexibility by allowing individual offices to determine needs and justify equipment requests
- Require a strong central management group (to be located in SER) to supervise the large-scale investment and to:
  - Establish and implement the Agency-wide Plan
  - Support and guide local office users of automation technology
- Provide procedures for collection and analysis of performance data by both the users and the central management group, established to:
  - Monitor equipment and personnel problems for correction
  - Provide equipment and configuration advice
  - Evaluate office automation results.

This is a bold and aggressive approach to office automation implementation. The greatest benefits of this strategy are that AID will rapidly derive major improvements in productivity, work flow and coordination. These benefits are a direct consequence of the scale of the system configuration.

If fully implemented, the system will connect all major offices in an integrated network. Of course, careful management of the Plan's implementation is required, as a consequence of the Plan's scale and short time-frame.

2. THE PLAN IS DIVIDED INTO TWO STAGES

The office automation implementation plan is divided into the following stages:

- Plan A—Improvement of clerical productivity by building a core network of office automation equipment satisfying the immediate word processing and communications needs of many USAID and AID/W organizational units. This stage includes the following steps:
  - Equipment acquisition
  - Process and systems evaluation
    - .. Procedural reviews
    - .. New procedure design
    - .. Workload and staffing adjustments
  - Personnel training.

  Plan A is planned for the first two years of the implementation period.

- Plan B—Expansion of the breadth and depth of the network coverage to include more processes and more organizational units. The network's capabilities would be expanded, and the emphasis would shift from improving clerical to improving professional productivity. Plan B is planned to cover the last three years of the implementation period.

Plan A is developed in detail to permit immediate implementation. Plan B provides broad direction and guidance for implementation and a cost projection base. The implementation costs for the plans should be approximately:

- $5,500,000 for Plan A, including some 28 person-years of effort (of which 2/3 will be contract service) directly associated with the plan
- $11,300,000 for Plan B (in 1979 dollars), including 45 person-years of effort (of which 30 will be contract service).

3. THE SYSTEM USES A VARIETY OF COMPATIBLE TECHNOLOGIES TO PROVIDE ADEQUATE INFORMATION PROCESSING CAPABILITIES AT REASONABLE COSTS

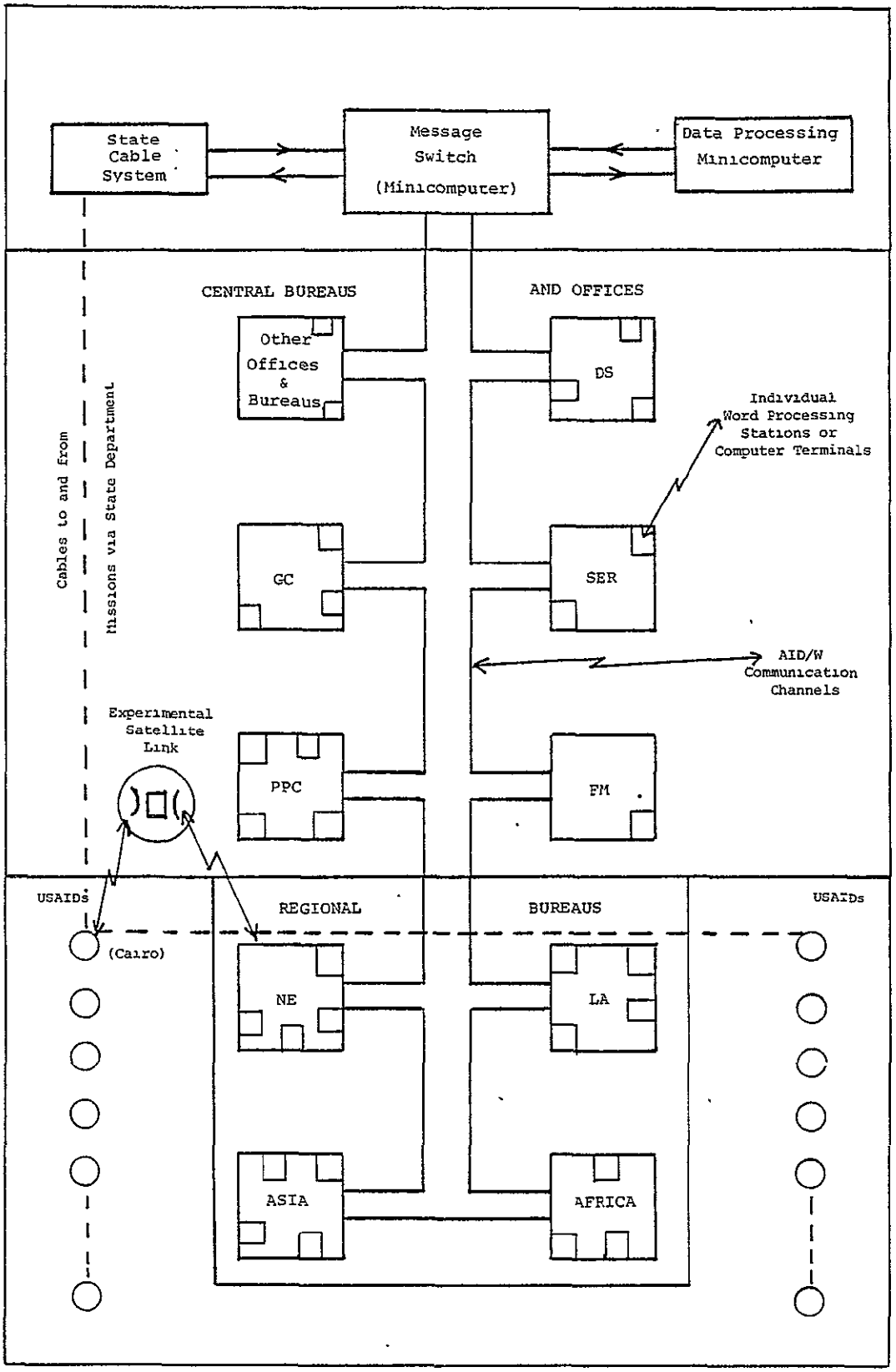
The system design describes an integrated network of information processing and communications equipment. Exhibit III, following this page, graphically illustrates the information channels which would be used among the missions and offices at AID/W. The system consists of:

- A central telecommunications network interconnecting all participating elements of AID/W
- Separate word processor units in individual offices
- A data processing system that permits broad access to files and documents
- Optical character recognition scanners and electric typewriters with OCR fonts to link even remote sites with AID/W.

The plan uses a modular approach, allowing AID to quickly build the system in those missions and regional

EXHIBIT III

Conceptual Office Automation System



bureaus in which the need is greatest and there is commitment to the system. Those offices where the need is not as great or which do not make commitments to the system could be added later during the implementation phase.

4. A CENTRAL AUTHORITY IN SER WOULD MANAGE THE SYSTEM IMPLEMENTATION

A strong management structure is vital to the plan's success. A central authority located in SER is suggested which would be responsible for:

- Monitoring all aspects of the plan's implementation
- Ensuring adherence to established compatibility standards
- Assisting AID Office of Personnel in classification and training activities
- Providing assistance to requesting AID offices on such issues as equipment usage, training plans, and new work procedures
- Assisting in the cost analysis and justification for procurement of equipment.

5. IMPLEMENTATION OF THE PLAN WILL SIGNIFICANTLY BENEFIT AID

The careful implementation of the office automation plan will provide AID with increased communications capabilities, reduce duplication of effort and increase staff productivity. These benefits will come at a time when staff resources will not be augmented and may even be reduced and program appropriations will be increased. The

plan outlines a process for implementing a system which is fully cost-justified, for training staff to use it properly and for maintaining equipment compatibility and usage.

The Agency spends an estimated $62 million annually on the CDSS, PID/PP, ABS, and CP processes alone. By way of comparison, the automation plan will cost an average $3.4 million annually. Clearly, an improvement in clerical and professional productivity of the magnitude typically obtained through office automation will fully justify this expenditure.

TYPES OF OFFICE AUTOMATION EQUIPMENT

This attachment identifies the three categories of office automation equipment used in the plan and provides brief definitions of each.

WORD PROCESSING

Word processing equipment is a sophisticated version of the electric typewriter. All word processing units have memory capabilities which allow the storage of typed information in electronic form. This stored information can be readily retrieved and printed to produce a typed, hard copy document. The memory capability also allows new information or revisions to be quickly and easily incorporated into the prepared text, without extensive retyping.

Additional equipment features may include:

- Visual display screens
- Text editing
- Copying units.

Word processors can be used as standalone equipment (i.e., separate units in individual offices) or can be connected to other office automation equipment to send or receive data through a communications network.

DATA PROCESSING

Data processing equipment includes large mainframe computers, remote terminals, minicomputers and certain sophisticated word processing devices. A common feature in all data processing equipment is an ability to store, organize, and manipulate large volumes of data rapidly. This data can be textual (e.g., words or written narrative) or numeric (e.g., tabular, budgetary, statistical).

Data processing equipment can be programmed to arrange, re-group, compute, print or manipulate stored data. This equipment provides organized data in files and can be used to improve and expedite:

- Reporting, e.g., accounting and personnel
- Statistical analysis, e.g., economic data bases

- Modeling, e.g., disaster assistance scenarios under a variety of circumstances

- Monitoring, e.g., commodities shipment schedules.

Individual offices can obtain data processing assistance directly from equipment located in the office (i.e., minicomputers), from equipment kept in a remote geographic location (i.e., remote terminals linked to a mainframe computer) or indirectly from hard copy documents produced at another location on a mainframe or minicomputer.

TELECOMMUNICATIONS

Telecommunications technology makes it possible to transmit data instantly by electronic means using land (telephone) lines, satellite channels and/or radio waves. Equipment that support this data transmission includes communicating word processors, computer networks, facsimile transmission (telefax) equipment, message switching computers and more common devices like the telephone, telegram, telex, radio and television. These devices greatly reduce the time required to send and receive information. High speed digital data transmission (computer networks, telex, telefax) using land lines, satellite channels or radio waves can be especially useful for rapid transmission of long documents as well as shorter cables and memos. Offices linked through telecommunications network have direct access to one another, which can permit more responsiveness and better coordination.

IMPROVEMENTS IN THE PID/PP PROCESS THAT WILL BE ACHIEVED THROUGH OFFICE AUTOMATION

The PID/PP process was one of five processes that were studied. This attachment identifies, in some detail, the office automation applications that can be made in the PID/PP process and the benefits that would result.

The project development cycle typically begins in a USAID where a design team prepares a Project Identification Document (PID). The PID outlines the project concept and implementation strategy. The PID is transmitted to AID/W where both regional bureau and central bureau offices review and comment on the design. If the PID is approved by AID/W, the design team expands the project concept into a more detailed document, the Project Paper (PP). Like the PID, the PP is also transmitted to AID/W for review and approval unless the mission has been delegated authority to approve the PP in the field without processing in AID/W.

The elapsed time of this cycle of events could be greatly reduced through the expanded use of office automation equipment. Further, both professional and clerical resources required to staff the PID/PP process would also be significantly reduced, as described below.

(1) Preparation of the PID and PP

By expanding its use of automation, AID can substantially expand its data bases and improve dramatically its ability to transmit rapidly the data to wherever it is needed.

Some of the larger USAIDs could be provided with large scale, rapid telecommunications capabilities to access information maintained in AID/W (in the DIS, ESDB, and other locations) and frequently required by design teams in the field. The information which might be useful to design teams includes:

- An index and synopsis of approved and active projects in similar or related areas. This data might identify project ideas, strategies and solutions which have been explored in previous project design efforts.

- An index and synopsis of background and information, statistics and other baseline data from previous work which supports the project under development.

The ability to rapidly access such information can improve the quality of a project design and reduce the professional labor required to produce the PIDs, PPs and their supporting documentation. With this kind of information:

- It would take less time for contractor or new Agency staff to learn how AID develops a project

- Experienced staff could quickly become well-versed in a new program area or a host country's requirements

- Previous feasibility studies, survey results or other background information can be incorporated into the current design work, thus preventing the need to re-do previous work to develop the project.

(2) Typing and Revising the PID and PP

As design documents, both the PID and the PP go through many drafts before they are approved by the USAID and forwarded to AID/W. This drafting, proof-reading, revision and retyping process is time consuming for both clerical and professional staff. Where word processing equipment is available, mission staff would reduce the amount of time devoted to the multiple drafts of the PID and PP:

- While the original project design must be completely typed, clerical staff need only retype those sections of the PID and PP that are changed, thus eliminating the need to retype entire sections of the document

- Professional staff would save some proof-reading time, as only the revised sections must be checked for errors

- Because revisions would be easily and quickly incorporated into the text, professional staff need not hesitate to add to or revise the text

- Finally, the word processing equipment would produce an attractive, error-free final copy of the document, and if it is equipped with a copier, could produce several original typed copies of the PID and PP.

In summary, word processing equipment would speed the work flow in the preparation of these documents and permit the preparation of a high quality final product.

(3) Transmission and Distribution in AID/W

There are devices that can improve the transmission and distribution of PIDs and PPs from both major missions with word processing equipment and other missions with OCR equipped electric typewriters.

Missions that can maintain word processing equipment will not have to submit multiple hard copies of the PID and PP to AID/W. If a satellite link is available, the data can be transmitted directly to AID/W in electronic form. If one is not available, the disk or tape from the mission's word processing equipment (which stores the document in electronic form) can be hand carried to Washington or sent by mail (pouch).

Upon receipt in AID/W, the disk or tape would be put into a compatible word processing unit in AID/W (probably one of the offices in a geographic bureau) without retyping. The documents would be quickly reproduced in the receiving AID/W office, and the PID or PP would be electronically distributed to all reviewing offices in the regional bureau and participating central offices, if the equipment in these offices is linked by a message switching device into an AID telecommunications network.

USAIDs without word processing equipment would also benefit from a network in AID/W. While the lack of word processing and high volume telecommunications equipment would prevent the mission from transmitting the PIDs and PPs to AID/W in electronic form, electric typewriters in the mission would be equipped

to prepare text which can be converted into electronic form in Washington through use of an optical character recognition (OCR) type font. The original copy typed with OCR fonts in a USAID would be sent to AID/W where offices equipped with optical character readers scan the document, convert it into electronic form and store the data on a tape or disk. Thus, the USAID generated hard copy PID or PP document would be entered into the AID/W word processing system without retyping.

(4) Review and Approval

The capacity to quickly reproduce and distribute the PIDs and PPs in Washington reduces delays in the PID/PP review process. A longer review period, extended by rapid document distribution, can contribute to the development of higher quality documents and programs. Word processing equipment would also facilitate rapid incorporation of revisions to PID and PP documents during the review process in AID/W. With the electronic storage of original documents, AID/W offices can easily re-arrange text, add information and revise text to facilitate preparation of an approved PID and PP.

If substantial changes to the document are required for AID/W approval, word processing equipment would facilitate the production of the revised document. Missions need only prepare and submit the required revisions to AID/W, where they would be incorporated into the original document. This process will save both time and labor in USAIDs, particularly when a critical PP needs some re-working to obtain AID/W approval.

(5) Overall PID/PP Savings

Exhibit A, following this page, has been developed to illustrate the various steps involved in the PID/PP process and the impacts of automation.

- The PID process begins ① in a USAID, where the document is originally prepared. Assuming that this is a mission to be equipped with word processing, e.g., Cairo, then the full advantages of ease of text preparation and revision are available.

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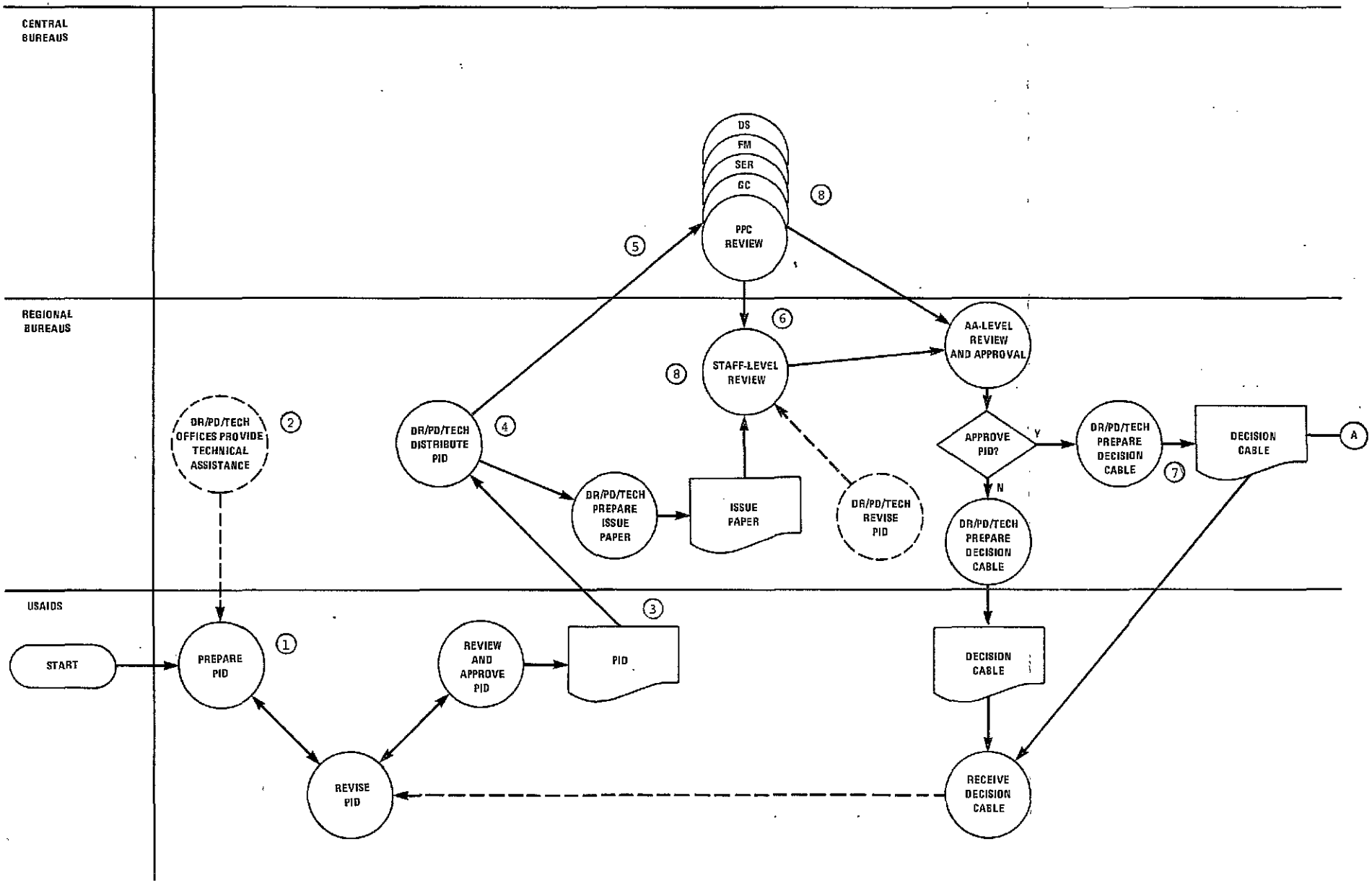
EXHIBIT A



Improvements in typing productivity of the order of thirty percent are realized across all of the aspects of text preparation. Since a typical PID can go through at least three, and as many as eight typed versions, it is apparent that word processing can save many days of work time in its preparation.

During the preparation of the PID, the PD and Tech offices of the regional bureau often help the USAID ② . Improved communications available in Washington via the message switching network will allow expedited handling of requests. The easy flow of cables via the message switch to action desks will support this process.

When the PID is approved for transmission to AID/W, it is sent ③ in the form of electrical storage discs (via pouch or messenger), and accepted into the word processing system in the Regional Bureau ④ . Once in the word processing system in Washington, the document can be:

- Transmitted to all interested parties in the central bureaus for their review ⑤ and comment back to the regional bureau ⑥ .

- Revised in accordance with text changes introduced after the review process is complete ⑦ , without retyping the whole text.

- While the document is circulating in Washington, tentative revisions can be prepared at any office involved in the review process by additions or deletions via word processing.

- Revisions involving budgetary considerations, or existence of supporting facts are aided by data processing assistance available at terminals in central and regional bureaus ⑧ .

The advantages of supporting the PID/PP process with office automation technology are clear. The elapsed calendar time now required to produce, transmit and distribute the documents can be reduced significantly. As a result, the quality of the programs and supporting documentation can be improved because of the additional time that can be made available for program design and review. Further, the labor necessary for typing (clerical), proofreading (professional and clerical), and document production and distribution (clerical) will be reduced substantially by automation. Those savings in productivity can be translated into an increased ability to perform more work or to reduce the staff necessary to conduct the same amount of work.

All target processes would similarly benefit. The same applications of automation are planned, and similar benefits would be obtained.