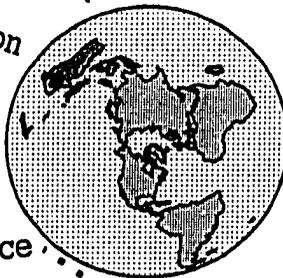


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STRATEGIC INFORMATION TECHNOLOGY PLANNING FRAMEWORK

Protection of Environment
Improved Health and Education
Enduring Democratic Institutions
Sustainable Economic Growth
Transition from War to Peace



for

USAID/El Salvador
Executive Office
Computer Services Division
Contract N°: 519-0000-S-00-3237-00

by

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Minority Intern Program



El Salvador

Abstract

This study is USAID/El Salvador's 1994 *Strategic Information Technology Planning Framework* (SITPLAF). Its main goal has been to generate a series of recommendations on the topic of information technology and its current and future use by end-users, namely the 250+ staff of USAID/El Salvador. This study is to be submitted to the Computer Services Division (CSD) Administrator, the EXO Office, and the Automation Committee of this Mission. They may choose to use a portion or all of this report as part of the annual *Information Systems Plan* (ISP). The recommendations arrived at in this report are, to an extent, based on a broad background literature review of USAID on the topics of information technology, information systems, general and specific organizational goals, and the basic notion of U.S. foreign aid. Furthermore, and to a larger extent, the results of this report are based on interviews conducted with all top managers and decision makers of this USAID Mission, in addition to more than a dozen middle-level managers both of American and Salvadoran nationality. A total of 31 interviews were conducted. The questions posed to the interviewees were on the general concepts of division goals, *corporate* or shared data, and inter-divisional computer and information systems. The 23 recommendations arrived at concern, among other things, the issues of information sharing, provision of public documents through the computer system, more efficient communications, the environmental component of information technology, organization-wide systems compatibility, and training of staff in existing and new information technology.

This report was written as part of contract N°: 519-0000-S-00-3237-00, an agreement with the Office of the Executive, Computer Systems Division of the USAID/El Salvador Mission. The author takes full responsibility for its contents (109 pages) ■

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Guide to Acronyms

AID	Agency for International Development
ANR	Agriculture and Natural Resources
APCD	Approximate Project Completion Date
AWACS	AID/Washington Accounting and Control System
CDIE	Center for Development Information and Evaluation
CD-ROM	Compact Disk - Read Only Memory
CO	Contracts Office
CONT	Controller's Office
CSF	Critical Success Factors
CSD	Computer Systems Division
DDIR	(Office of) Deputy Director
DIR	Director's Office
DPP	Development Planning and Programming Office
ECON	Economic Planning and Analysis Office
EXO	Executive Office
FA	(Directorate of) Finance and Administration
FUSADES	Fundacion Salvadoraña para el Desarrollo Economico y Social
HPN	(Office of) Health, Population, and Nutrition
IRD	(Office of) Infrastructure and Regional Development
IRM	(Office of) Information Resource Management
IS	Information Systems
ISP	Information Systems Plan
IT	Information Technology
LAN	Local Area Network (Computer)
MACS	Mission Accounting and Control System
MIS	Management Information System
MOMS	Mission Operation Manuals
NGO	Non-Governmental Organization
ODI	Office of Democratic Initiatives
OET	Office of Education and Training
PRE	(Office of) Private Enterprise
PRJ	(Office of) Projects
PVO	Private Voluntary Organization
SITPLAF	Strategic Information Technology Planning Framework
USAID	United States Agency For International Development
USG	United States Government

Introduction

"Today, I learned to turn one on. I pushed a button down there, and a little one up there with green on it, and out came a command for someone I had written."

-President George Bush on his new computer (quoted in Gilbert 1994).

Over the past few years, there have been surges in the improvement of information technology, its widespread use among people from ordinary citizens to statesmen, and in the facility of access to a profusion of varied data. Modern *cybernetics* and the *information highway* are fast approaching (Gelemtzer 1994). Private and public institutions have, therefore, attempted to improve and build upon their information systems in order to stay competitive and take advantage of the new technology. Likewise, USAID through its office of Information Resource Management (IRM) has promoted a series of technical and policy improvements for the Agency as a whole. USAID/El Salvador is attempting to improve its information systems as well. This document [the *Strategic Information Planning Framework* (SITPLAF)] is part of that effort. Before further elaboration on the SITPLAF study, in order to impart to the reader the significance of this study as related to the overall USAID/El Salvador Mission, a short overview of U.S. assistance to El Salvador would be helpful.

For fiscal year 1994, the United States Government allocated a total of \$14.4 billion - approximately 1% of its total federal budget for that year- towards foreign aid programs ¹ (Holmes 1993). The foreign policy goals which that sum is to promote, according to President Clinton, are: 1) promotion of economic growth through free market principles, 2) advancement in health and family planning, 3) democracy building, and 4) environmental protection and sustainability (The Miami Herald 1993) ². These goals are nearly identical to USAID/El Salvador's stated "priority areas" or *strategic objectives* ³ (USAID/El Salvador 1993-b). In addition, those objectives are close to the goals formally adopted by the Central American governments in the 1990 *Antigua Declaration* ⁴.

Although El Salvador is, geographically, the smallest country in the American continent, having less than six million inhabitants and possessing insignificant post-Cold War international political leverage, in contemporary history, even after the termination of its civil war, El Salvador has remained

¹ That figure includes every type of aid from military assistance, anti-narcotics, disaster assistance, the Peace Corps, contributions to the U.N., and the World Bank (Holmes 1993). The U.S. and Japan are the top two providers of aid worldwide. As opposed to Japan, however, up to 43% of the entire U.S. foreign aid budget consists of U.S. tax payer funded "arms-export subsidies that encourage foreign governments to buy American arms" (Omicinski 1994).

² A new bill facing Congress, titled the *Peace, Prosperity, and Democracy Act*, intended to replace the 1961 *Foreign Assistance Act*, proposes six objectives for U.S. foreign aid: 1) *sustainable development*, 2) *building democracy*, 3) *promoting peace*, 4) *providing humanitarian assistance*, 5) *promoting growth through trade*, and 6) *advancing diplomacy* (Callahan 1994).

³ For its five year (FY 1990-94) strategy, USAID/El Salvador has defined its goals as: "1) economic and social stabilization; 2) economic growth; 3) broadening the benefits of growth; and 4) strengthening democratic institutions" (USAID/El Salvador 1989). In the 1993 *Annual Budget Submission*, Director Costello of AID/El Salvador lists the four areas of 1) Population and health, 2) Environment, 3) Democracy, and 4) Economic Growth to be the Mission's general foci (USAID/El Salvador 1993-b).

⁴ The Antigua Declaration adopted the following broad goals: 1) *Development of stable, democratic societies*; 2) *Achievement of broad-based, sustainable economic growth*; and 3) *Attainment of effective regional cooperation* (USAID/Washington 1991-b).

in the forefront of U.S. foreign policy. Figure I (page 6) shows the total amount of U.S. economic and military assistance delivered to El Salvador in the past 14 years -a total of \$4.7 billion. For fiscal year 1993, the U.S. Congress requested \$236.4 million of economic and military assistance for El Salvador, placing it as the fourth largest recipient of U.S. foreign aid, just below Israel, Egypt, and Turkey (USAID/Washington 1993-a). (See Figure II, page 7). When the same top ten countries receiving U.S. military and economic aid are ranked relative to their populations and amount of U.S. aid received; i.e. based on *per capita* of U.S. aid received, El Salvador becomes the largest receiver of U.S. foreign aid after Israel. (See Figure III below). In addition, of the 112 USAID missions worldwide, AID/El Salvador ranks fifth in terms of the number of staff employed (USAID/Washington 1993-d). (See Figure IV, page 8).

Figure III
Top Ten Per Capita Recipients of
U.S. Economic and Military Aid
 (FY 1993)

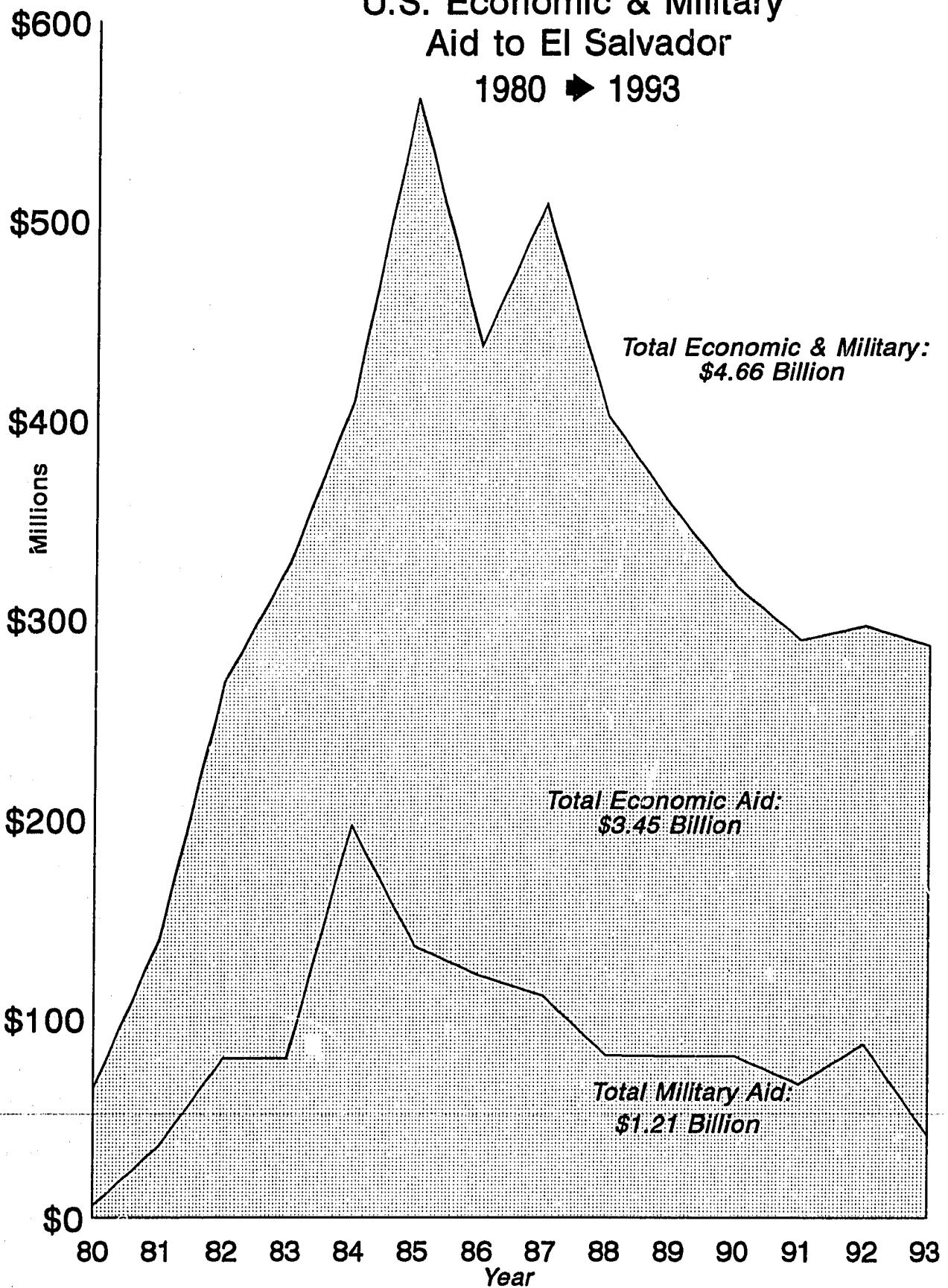
Country	U.S. Economic & Military Assistance	Population (millions)	Per Capita U.S. Aid
Israel	\$3,000,000,000	4.7	\$638.3
El Salvador	\$286,400,000	5.2	\$55.1
Nicaragua	\$190,690,000	3.9	\$48.9
Egypt	\$2,266,800,000	52.1	\$43.5
Bolivia	\$117,087,000	7.2	\$16.3
Turkey	\$578,900,000	56.1	\$10.3
Peru	\$163,017,000	21.7	\$7.5
Philippines	\$236,397,000	61.5	\$3.9
Bangladesh	\$133,197,000	106.7	\$1.3
India	\$127,086,000	849.5	\$0.15

(Sources: USAID/Washington. 1993. A.I.D. Congressional Presentation FY 1993 Statistical Annex, 646 pp. & The World Bank. 1992. World Development Report 1992: Development and the Environment, 308 pp.)

During fiscal year 1994, the amount of U.S. economic assistance to El Salvador carried through by USAID is an obligated sum of \$119 million. The actual expenditures during 1994 -taking into account obligations of prior years- is estimated at \$254 million. Figure V (page 9) shows the breakdown of the 1994 total U.S. economic obligations to El Salvador based on USAID/El Salvador's strategic objectives. Figure VI (page 10) shows those strategic objectives (SOS) with their corresponding *program output indicators* ⁵.

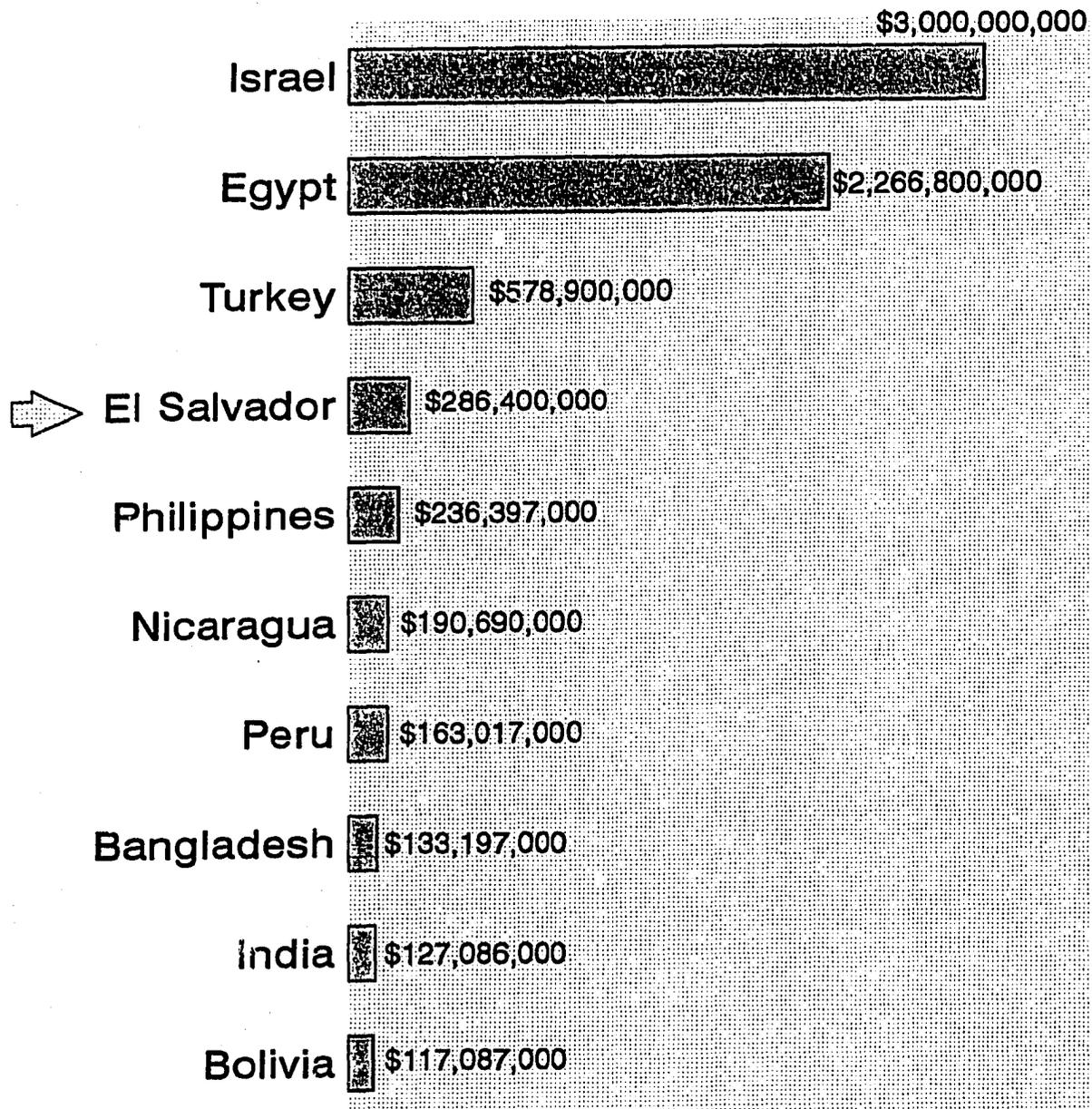
⁵ A 1992 USAID/El Salvador study titled *Monitoring Program Performance* proposed a series of surveys during 1993-97 time period as indicators for measuring the program output and in turn evaluating the set strategic objectives. This process was proposed to be a cornerstone of an overall mission monitoring methodology. The total survey costs were estimated at about \$3.8 million (Erhardt et al. 1992).

**Figure I:
U.S. Economic & Military
Aid to El Salvador
1980 ► 1993**



(Source: USAID/Washington, 1980-1993, A.I.D. Congressional Presentation)

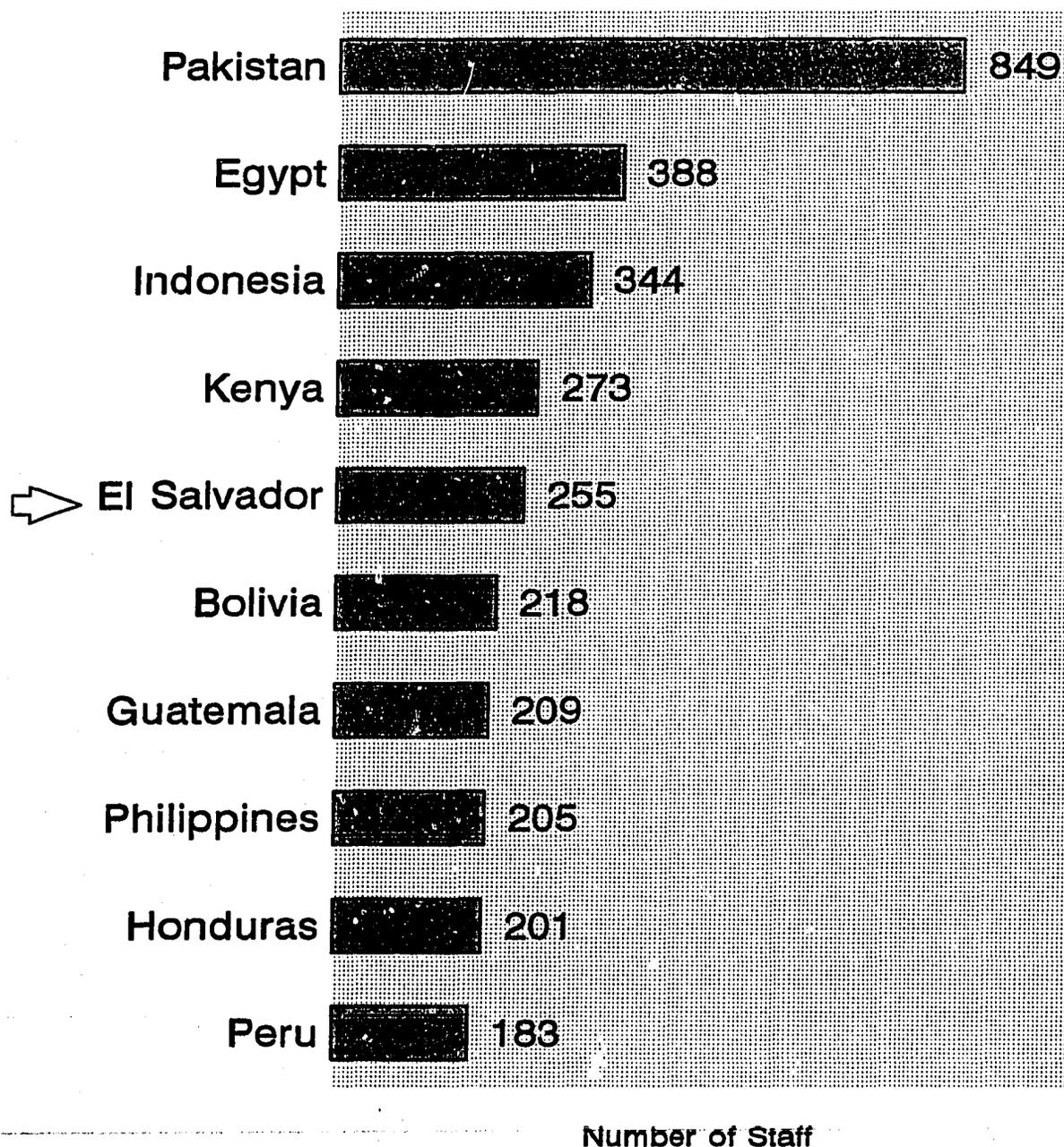
**Figure II:
Top Ten Recievers of
U.S. Military & Economic Assistance
(FY 1993 Requested Figures)**



U.S. Military & Economic Assistance

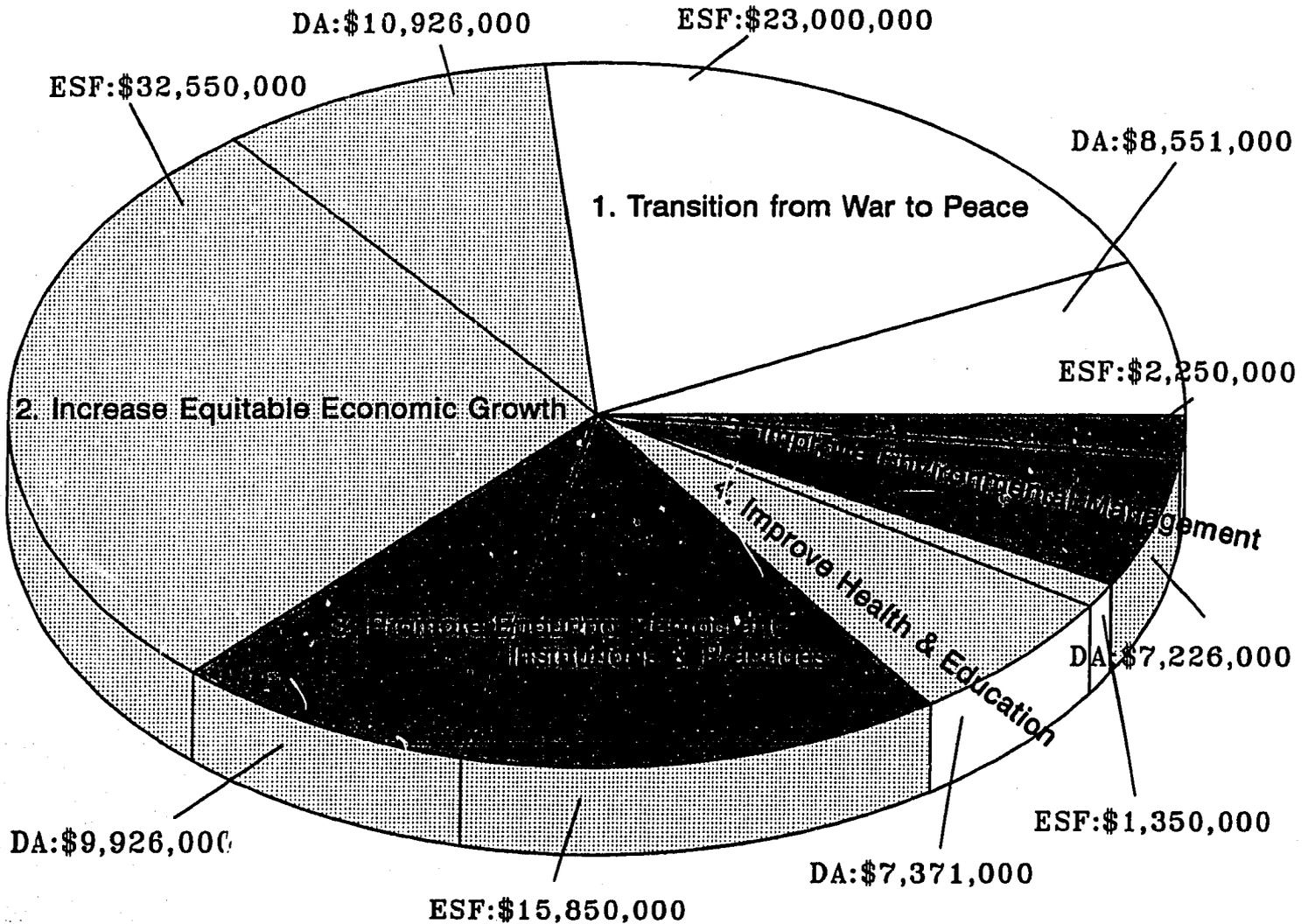
(Source: USAID/Washington. A.I.D. Congressional Presentation: FY 1993 Statistical Annex, pp. 56-57)

Figure IV:
Top Ten USAID Missions
(Based on Total Number of Staff)



(Source: USAID/Washington. 1992. Information Systems Plan, Vol. II: Appendices)

**Figure V:
FY 1994
USAID/EI Salvador's
Assistance Breakdown**
Based on Strategic Objectives &
Total Obligations: \$119 Million
(Total Expenditures: \$254 Million)



DA = Direct Assistance: \$44 Million
 ESF = Economic Support Funds: \$75 Million

(Source: USAID/EI Salvador. 1993. *Annual Budget Submission: FY 1995*)

Figure VI
USAID/El salvador's Strategic Objectives

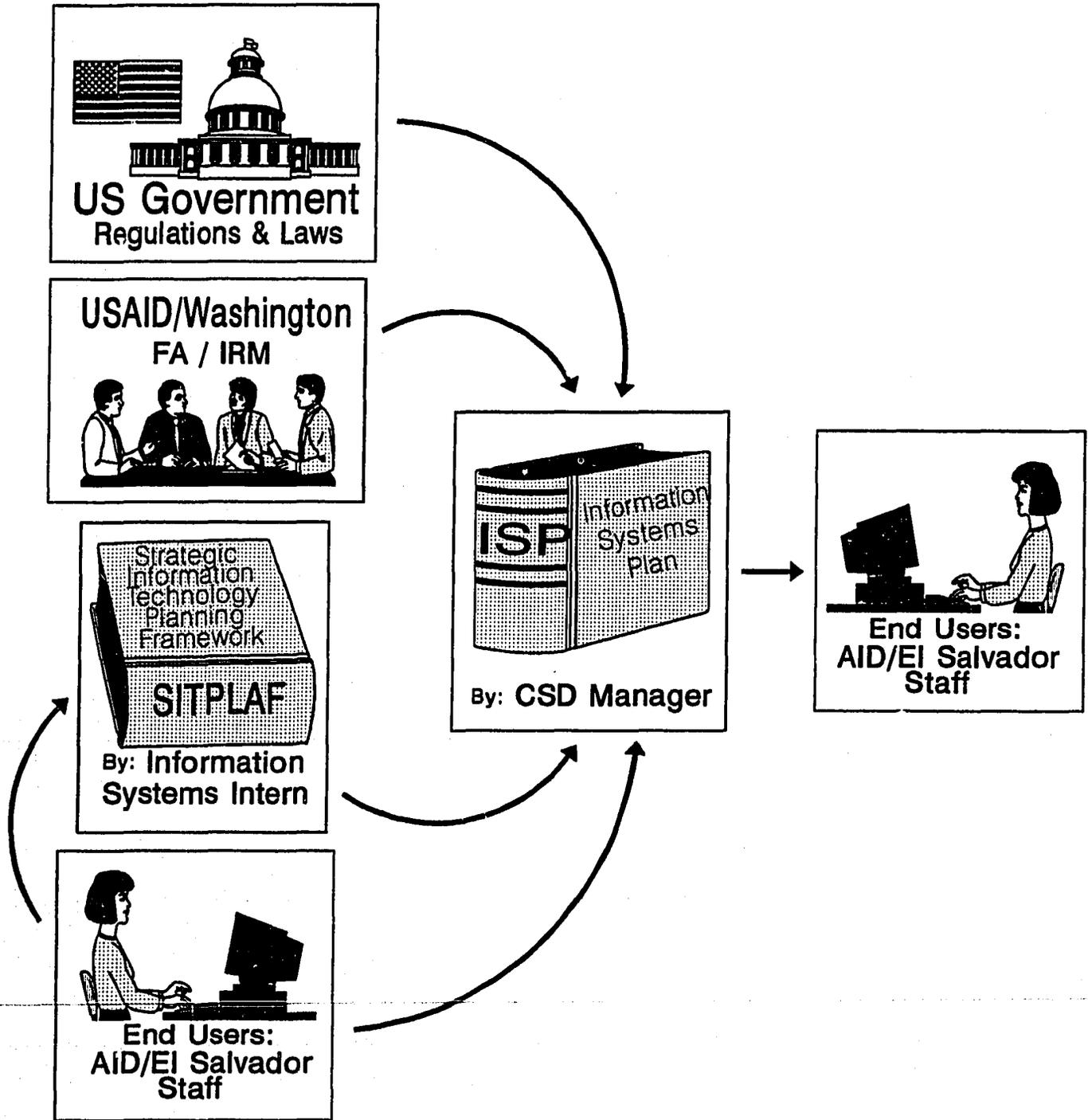
Strategic Objective	Program Output Indicators
so1: Assistance in Transition from War to Peace	1) Reactivate factors of production to respond to economic opportunities; 2) Re-establish access to basic services; 3) Build local level democratic institutions & increase civic participation.
so2: Increased Equitable Economic Growth	1) Creation & maintenance of appropriate economic policy framework; 2) Increased private investment; 3) Increased exports; and 4) Increased employment.
so3: Promote Enduring Democratic Institutions & Practices	1) Strengthen citizen participation in the decision-making process; 2) Improve procedural protection related to timeliness & impartiality in the judicial system; and 3) Improve public sector financial management & accountability.
so4: Healthier & Better Educated Salvadorans	1) Increased efficiency & effectiveness of the K-6 educational system; 2) Increased contraceptive prevalence; 3) Increased number of Salvadorans receiving health & child survival services; and 4) Increased number of rural Salvadoran households with access to potable water & latrines.
so5: Improved Environmental & Natural Resource Management	1) Natural resource use policy/legal framework created & implemented; 2) Increased public awareness of environmental problems in target areas & nationwide; 3) Improved productive activities which are consistent with better natural resource management.

(Source: USAID/El Salvador. 1993. Action Plan FY 1994-1995. Office of Development and Project Planning)

▷ Purpose of SITPLAF Study

As mentioned above, AID/Washington through its IRM Office has undertaken a series of changes to increase the efficiency and effectiveness of the Agency. This should translate into savings of money and time. One technical improvement has been to convert 33 USAID handbooks (10,000 pages) into one CD-ROM (Compact Disk - Read Only Memory); this procedure alone will save the Agency \$300,000 annually in printing and mailing costs (USAID/Washington 1994-b). Further, as part of its overall improvements, AID/Washington has required all missions worldwide to undertake an *information systems plan* (ISP) on an annual basis. The purpose of this plan is to outline the necessary software, hardware, and policies necessary for a given mission in a given year. Leading to its ISP, USAID/El salvador has attempted to conduct a comprehensive study on the state of the Mission's information technology and the staff's (end-users) various technical and logistic needs. SITPLAF, is to represent that endeavor.

Figure VII:
SITPLAF Study in Perspective



Some USAID/El Salvador projects involve, as part of their objectives, the acquisition and promotion of information technology for various host-country institutions. For example, the project labeled *Technical Support, Policy Analysis, and Training* has among its goals "increased availability and use of statistical and analytical materials and methods" ⁶. Another project includes "Management and Information Training" as part of its goals ⁷. In yet another project, as part of AID's Judicial Reform Project, \$1 million worth of computers have been provided to the judicial system as part of the project's goal of promoting "public confidence in the integrity of the [Salvadoran judicial] system" ⁸. AID's *Public Services Improvement Project*, inter alia, attempts a feasibility study of replicating a certain "computerized inventory control system" ⁹. SITPLAF, however, confines itself to an analysis of the internal information technology needs of the USAID/El Salvador Mission itself. Nevertheless, the Mission's use of such technology can positively affect its relations with AID/Washington and host-country institutions.

According to the Office of IRM, AID/Washington's Strategic Information Systems Plan is to "provide a framework for how data, information systems, and technology can best be linked to meet user needs" (USAID/Washington 1993-d p. II-4-4-4). The ISP document, to be compiled by the Computer Services Division (CSD) Administrator, receives the following input: 1) information and guidelines from U.S. Government regulations and laws regarding the acquisition and purchase of equipment, 2) instructions from AID/Washington's IRM and FA (Directorate of Finance and Administration) offices, 3) AID/El Salvador end-users' input, and 4) the SITPLAF study itself. SITPLAF is, therefore, a kind of predecessor to, or a draft version of, the ISP. Figure VII (previous page) shows the SITPLAF and ISP documents in perspective. The following sections of this report further delves into the background of USAID's policies on information systems, outlines the methodology used to gather the information necessary for this report, and lists the final recommendations to be submitted to the, USAID/El Salvador Automation Committee, the EXO Office, and the CSD Administrator as input for the USAID/El Salvador 1994 Information Systems Plan ■

⁶ USAID/El Salvador project N° 519-0349/ Approximate completion date (APCD): 7/31/96. This project, which is aimed at the Salvadoran Ministry of Planning, is supposed to contribute to the Mission goal of *increasing equitable economic growth*. Its Budget has been set at \$32 million for seven years (USAID/El Salvador 1993-d).

⁷ Project N° 519-0315, *Training for Productivity and Competitiveness*/ Approximate completion date: 8/31/93. This project is aimed at ex-FMLN and SAF combatants who are in need of skills for their return to civilian life. It is being implemented through Fundación Empresarial para el Desarrollo Educativo (FEPEDE)/ APCD: 8/31/94/ Budget: \$14 million for seven years (USAID/El Salvador 1993-d).

⁸ Judicial Reform Project, N° 519-0296, Implementing agency: Ministry of Justice, Public Ministry, Supreme Court, Commission for Investigation/ APCD: 3/31/93, Budget: \$13 million for 10 years.

⁹ Public Services Improvement Project, N° 519-0320/ APCD: 9/30/94/ Major Contractor: Louis Berger Intl./ Budget: \$75 million for five years.

Background Review

PLAN: "A detailed scheme, program, or method worked out beforehand for the accomplishment of an object; a proposed or tentative project or purpose; intention."

STRATEGY: "The science or art of military command as applied to the overall planning and conduct of large-scale combat operations; a plan of action resulting from the practice of strategy."

GOAL: "The objective toward which an endeavor is directed."

- Webster's Dictionary

Currently there exist a "paucity of both conceptual and empirical research focusing on information technology in a global context" (Gibson 1994). With regard to USAID, a certain amount of detailed research have been done on information technology and its use by its headquarters in Washington (USAID/Washington 1991-c, 1991-d, 1993-c & 1993-d), further research and strategic planning on the topic - specifically as related to overseas mission is timely.

In his research, Gibson introduces seven *information technology architecture elements* as variables for measuring the *international information technology architecture construct* (Gibson 1994 p. 30). The seven elements that he utilizes are summarized in Figure VIII (next page). In the formation of its Information Systems Plan, AID/Washington has utilized a slightly different approach. Below is a summary of AID/Washington's arrival at its ISP in terms of methodology and final recommendations. In effect, USAID/El Salvador's SITPLAF and its pursuing ISP documents are attempts at the regulation of similar information systems management, however, on a relatively smaller scale [*subsidiary* (overseas mission) vs. *headquarters* (AID/Washington)].

In 1991, AID/Washington's Office of IRM produced a series of *Strategic Goals* aimed for the six year period of FY: 1992-1997. Figure IX (page 15) outlines those goals and the strategies to be used for their achievement. Figure X (page 16) lists the initiatives developed by IRM in order to support the same five major goals. The estimated cost for those initiatives is about \$38.223 million (USAID/Washington 1991-d).

In 1992, the Office of IRM conducted a study leading to its ISP document. According to IRM, its ISP study had the following functions (USAID/Washington 1993-c): 1) analyses of the USAID enterprise in terms of its *mission, goals, and functions*; 2) assisting management in reengineering the business process; 3) becoming part of the enterprise's strategic planning process; and 4) establishing the information technology to support the Agency's business functions. The study was conducted using the methodology known as *Information Engineering*. Information engineering stresses three principles: ▶ Extensive user-involvement in defining organizational needs; ▶ shifting focus of information management from technology *per se* to the business impact of effective technology use; ▶ employing

Figure VIII: Gibson's Information Technology Architecture Elements

Elements	Description
1) Computing Compatibility	The idea of uniformity and <i>compatibility</i> among subsidiaries (e.g.: USAID Missions worldwide) and headquarters (USAID/Washington) through common computer systems. This will lead to <i>global interoperability</i> of data and information systems within the same organization. The ideal system would be <i>fully compatible and integrated</i> .
2) Data Transparency	The notion of the facility of data interchange and sharing. The ideal system would have access to data which are <i>continuously shared and highly transparent</i> .
3) Communications Connectivity	The idea of connectivity and ready communication within the subsidiary (inter-USAID mission connectivity) and with headquarters and other subsidiaries (intra-mission connectivity). The ideal system would have a <i>high frequency and volume of both routine and non-routine data transmission</i> .
4) Applications Functionality	The notion of what computer applications are used within the organization. The ideal system would <i>share best practices applications</i> .
5) Information Technology Planning	The idea of long range and strategic information technology planning. The ideal system would possess <i>integrated information technology and strategic planning</i> .
6) Information Technology Organization	The idea of the degree of autonomy of the subsidiary (USAID missions) with regards to information technology. The mission's information technology organization can be measured through a centralized-decentralized continuum. The ideal system would be <i>complex and hybrid</i> .
7) Information Technology Control	The notion of control on information technology with a range of independent (from headquarters) to integrated. The ideal system functions under <i>shared responsibility and control</i> .

(Source: Gibson, Rick. 1994. *Global Information Technology Architectures*. *Journal of Global Information Technology Management*, Vol. 2, No. 1, pp. 28-38)

*corporate data*¹⁰, i.e., using common structures, definitions and standards for data shared across systems and organizations. In addition, the information engineering methodology requires studying "the entire organization's information needs and carefully defining a number of *environments*: the information, systems, technology, and organization environments." (USAID/Washington 1993-c p. 2).

¹⁰ "Corporate data are data that need to be shared among two or more organizational entities" (USAID/Washington 1993-c p. 1).

**USAID's Information Resource Management Strategic Goals
(FY 1992-1997)**

IRM Goal	Description	Strategies
<p>▶ Goal 1: Information Infrastructure</p>	<p>▶ Develop an information infrastructure which will assure prudent management of information resources. The infrastructure includes facilities, equipment, methodologies, standards and procedures in support of AID program goals and strategies.</p>	<ul style="list-style-type: none"> ▶ Clarify IRM responsibilities for each AID organizational element; ▶ Integrate the IRM planning and budgeting functions; ▶ Define the IRM policies and methodologies integrated through a life-cycle development methodology; ▶ Increase proactive support to AID staff; ▶ Decentralize support to facilitate streamlining and improve productivity.
<p>▶ Goal 2: Worldwide Connectivity</p>	<p>▶ Provision of worldwide connectivity allowing AID staff to exchange information within their working groups, with AID/Washington, and other missions overseas in order to increase productivity and efficiency.</p>	<ul style="list-style-type: none"> ▶ Provide more cost effective management of telecommunications systems; ▶ Develop a network architecture which maximizes productivity; ▶ Assess the advantages of AID acquiring its own telephone services versus continuing as a customer of the State Department; ▶ Improve communications between AID overseas missions and Washington; ▶ Install E-Mail in all AID offices in Washington and missions; ▶ Provide all qualified staff desktop access to a work-station. Link work-stations to local area networks, and link networks to larger systems.
<p>▶ Goal 3: Corporate Systems and Services</p>	<p>▶ Provision of timely and accurate information to support Agency missions and goals. Develop and maintain key resource management information systems (financial, personnel, contractual, project), which would allow management to assure accountability and the prudent investment of Agency resources.</p>	<ul style="list-style-type: none"> ▶ Acquisition of state-of-the-art systems development technology and respective training to enhance system development capabilities; ▶ Triage (recycle) some old systems and improve others; ▶ Develop or acquire new systems; ▶ Incorporate data standardization, security, and portability objectives in modification efforts; ▶ Reduce redundancy and incompatibility in Agency systems through the utilization of information engineering methodology to define a Strategic Information Systems Plan and Business Area needs.
<p>▶ Goal 4: Technological Direction</p>	<p>▶ Direct the IRM program through the incorporation of new information management technologies and techniques needed to address current and future Agency challenges.</p>	<ul style="list-style-type: none"> ▶ Maintain contact with IT vendors; ▶ Perform research and development activities; ▶ Facilitate transitions to new technologies.
<p>▶ Goal 5: Information Architecture</p>	<p>▶ Improve the quality of all information for use by AID staff in decision making and analysis, through a systematic approach to data resources. The information architecture (data, application, hardware) must accommodate rapid strategic and tactical changes in response to the pursuit of U.S. interests and AID goals.</p>	<ul style="list-style-type: none"> ▶ Improvement of the structure of Agency information to determine what data the Agency should be generating to meet its goals; ▶ Develop information architecture (data, application, and hardware) to determine data redundancy and the widespread maintenance of <i>cuff</i> records;
		<ul style="list-style-type: none"> ▶ Increasing the accessibility and accuracy of data by investing in a central data administration program; ▶ Development of a database approach promoting integration across existing and planned hardware platforms.

(Source: USAID/Washington. 1991. **Strategic Information Resources Management Plan: Volume I, Fiscal Years 1992-1997**, 35 pp.)

Figure X: IRM's Initiatives in Support of its Main Goals

Initiative	Objective	Initiative	Objective
IRM PROGRAM MANAGEMENT ↓			
▷ Strategic Business Plan (IPM-1)	▷ By Institutionalizing a strategic business planning process, IPM-1 will provide clear direction to USAID and facilitate the development of strategic resources management plans. IRM will work with USAID's new Strategic Planning Office to ensure that IRM's Strategic Plan is in concordance with AID's general plans.	▷ Capacity Management & Planning (H-5)	▷ To ensure that AID has enough computer capacity to accommodate the requirements of its users.
▷ Information Engineering (IPM-2)	▷ To install a new systems methodology that incorporates the principles of information engineering and the use of CASE tools. As part of the IE methodology, an ISP is developed to define AID's Information requirements. Also, a number of Business Area Analyses are to have been completed. The above are to produce an integrated view of AID's total information needs and to eliminate redundant and inconsistent data.	▷ Mainframe Computer Replacement (H-6)	▷ Ensuring that there are sufficient mainframe computer capacity to accommodate the requirements of AID/Washington users.
		SOFTWARE ↓	
▷ Strengthening Field Support (IPM-6)	▷ To improve the responsiveness and effectiveness of support services to field operations by establishing regional information management support centers in each of the geographic regions (LAC, EUR, ASIA, NE, & AFR)	▷ AWACS Financial System (S-1)	▷ Creating an Agency-wide integrated financial management system meeting the objectives of OMB Circular A-127, JFMIP, reduces maintenance costs, and provides timely and accurate data.
▷ Quality Assurance (QA) (IPM-10)	▷ Implementation of a comprehensive QA program for all aspects of the IRM software cycle, ensuring the programs, systems, data and development activities to be performed in a qualitatively effective manner. Project manager will be accountable on this.	▷ Outsourcing Payroll/ Personnel (S-2)	▷ To determine the feasibility of moving the existing old and expensively maintained payroll and personnel system processing to another agency providing cross-servicing.
INFORMATION MANAGEMENT ↓			
▷ Data Administration (IM-1)	▷ In order to prevent duplication of data and maintenance costs, a formal data administration function is established in IRM to maintain corporate data resources. This function encompasses data standardization, integrity, sharing, policy, architecture, and modeling.	▷ Aid/washington Information Systems (S-3)	▷ To develop and implement high priority new application systems which support the management of AID programs.
▷ ADP Security (IPM-5)	▷ Policies and procedures to prevent misuse and unauthorized destruction or alteration of IS data and applications; and to protect against accidental and deliberate disclosure of sensitive or classified information.	▷ PRISM (S-8)	▷ Program Performance information for Strategic Management. To orient AID decision-making towards performance management and to develop an Agency-wide framework.
HARDWARE ↓			
▷ Excellence Through Automation (ETA) (H-1)	▷ ETA had as its goal the modernization of AID computer systems by moving from wang minicomputers to an open systems MS-DOS based architecture, and a one-to-one ratio of LAN-based PCs to employees.	▷ Network Architectural Plan (T-1)	▷ To develop the strategy for AID communications network (voice and data). The plan should evaluate resources, integrate them into logical network design, and examine alternative approaches.
▷ Open Systems Migration (H-2)	▷ To provide a strategy for the acquisition and implementation of open systems platforms to replace the current proprietary wang hardware.	▷ Telephone Management (T-2)	▷ To improve the planning and management of the telephone function within AID with cost-saving, quality service policies.
▷ Records Management (H-4)	▷ To establish policies, standards, & guidelines for the creation of electronic records and records management technologies.	▷ Cable Room Upgrade (T-3)	▷ Improve AID's telegram distribution system by upgrading the current communications technologies in the Communication Center.

(Source: USAID/Washington. 1991. *Strategic Information Resources Management Plan: Volume II, Fiscal Years 1992-1997*, 64 pp.)

Inter alia, the 1992 ISP study found that:

- ▶ USAID has a tremendous redundancy in corporate systems, both in Washington and across the missions. One reason being that there are two systems of computers within the Agency: IBM mainframes and Wang minicomputers. Hence most applications must be developed twice leading to redundancy and confusion;
- ▶ Although AID's basic business function varies little across the board, the way they are performed are different, leading to non-integrated and duplicate systems;
- ▶ There is little information sharing within USAID ;
- ▶ Much data-sharing is done through rekeying, leading to redundancy, and as much as 26% error rate in data-disbursement;
- ▶ AID's automated systems have concentrated on numeric or structured data, as opposed to *textual* data which can be critical for an agency which relies on ideas as well as numbers;
- ▶ AID sectoral data and reports are not readily available to potential users in an automated fashion;
- ▶ Automated systems are used by only a handful of Agency employees;
- ▶ Only about 35 out of 112 overseas sites have reliable desktop-to-desktop telecommunications with AID/Washington;
- ▶ Much of AID's computers are technically mediocre and behind current technology;
- ▶ About 40 of the Agency's larger missions use the proprietary Wang minicomputers, the annual upkeep of which is as very costly, relative to replacing the systems with UNIX open systems based servers;
- ▶ The U.S. Government *Paperwork Reduction Act* requires that a central authority exist for information management/information technology in all agencies including USAID. AID's IRM Office has not established such a system. Consequently, this has encouraged the development of *stove-pipe* systems that meet only the needs of individual offices and which do not talk to one another.

1992 USAID/Washington's ISP Recommendations

As a result, the 1992 ISP/Washington, inter alia, proposed the following solutions:

- ▶ All agency employees should have access to necessary information at their desktop workstation, including both numeric and text data;
- ▶ Senior managers should systematically be provided with up-to-date summary information used for monitoring, decision making and external reporting;
- ▶ All Agency personnel will be served by reliable voice and data communications to and from AID/Washington and Missions;
- ▶ To the extent appropriate, all exchange of data between USAID, its institutional contractors, other USG agencies and others should be done in electronic form;
- ▶ ~~The design of corporate systems should make Agency business transactions take place electronically;~~ AID corporate systems should also have a standard *look and feel*; similar functions should be performed on the same standardized software, regardless of organization or location; standardized data definitions and structures should be developed and enforced in order to facilitate data sharing;
- ▶ Training and documentation should be designed to maximize every employee's awareness of all available information which can enhance job performance;

► The Agency's IRM program should meet all Federal legislative and regulatory requirements.

The costs for the 1992 ISP/Washington plan, including hardware, software, telecommunication links, and installation and training, total an estimated \$46 million over five years. However, there is a potential for millions of dollars in savings, since the cost of not changing the information system infrastructure and practices will lead to the spending of \$250 million over the same five years on *business as usual*. According to the same ISP/Washington report "AID no longer can afford the luxury of continuing its *bad old ways* in information management" (USAID/Washington 1993-c p. viii).

An IRM created technique of measurement of overall USAID success is the system of *Program Performance Information for Strategic Management* (PRISM). PRISM summarizes the Agency's objectives in the areas of economic development, human development, environment, democracy and governance. It has registered 185 strategic objectives collected from 55 missions worldwide. PRISM provides the user with the following: 1) review of Agency progress in measuring program performance; 2) summaries of Mission program objectives and strategies; 3) descriptions of intended and actual results of these programs; 4) highlights of findings from the Center for Development Information and Evaluation; and 5) a review of steps being taken to strengthen performance monitoring and evaluation for results-oriented decision-making (USAID/Washington 1993-b).

The intention of SITPLAF is to produce a series of recommendations to be taken into account during the formation of the USAID/El Salvador 1994 ISP. The Mission's 1993 ISP contained the following components and aims: 1) installation of various core equipment; 2) training for new platform of AID/El Salvador staff; 3) installation of new platform (which requires, inter alia, for each end-user to have access to a PC); 4) conversion of E-mail application from Wang to the LAN environment; 5) migration of the Wang applications to UNIX based SUN Microsystems environment; 6) development of a Mission hardware maintenance program; 7) implementation of a permanent training program; and 8) creation of an application development program (USAID/El Salvador 1993-c). Figure XI (next page) shows USAID/El Salvador's information system architecture as of February 1994. In March 1994, an additional LAN computer was added ¹¹ and the E-mail system was converted from the Wang to the LAN system. That conversion can be seen in Figure XII (page 20).

The following chapter will outline the methodology and steps taken to gather end-user inputs and other information leading to the recommendations on USAID/El Salvador's information systems which this report, SITPLAF, has ultimately been required to furnish ■

¹¹ The Wang network computer systems will eventually be phased out of USAID headquarters and missions and replaced with the more functional LAN systems. For example, at USAID headquarters, under IRM's *Excellence Through Automation* initiative, 15 LANs were installed in 6 AID/Washington locations serving 1200 staff (USAID/Washington 1991-d).

Figure XI:
USAID/EI Salvador's
Information System Architecture

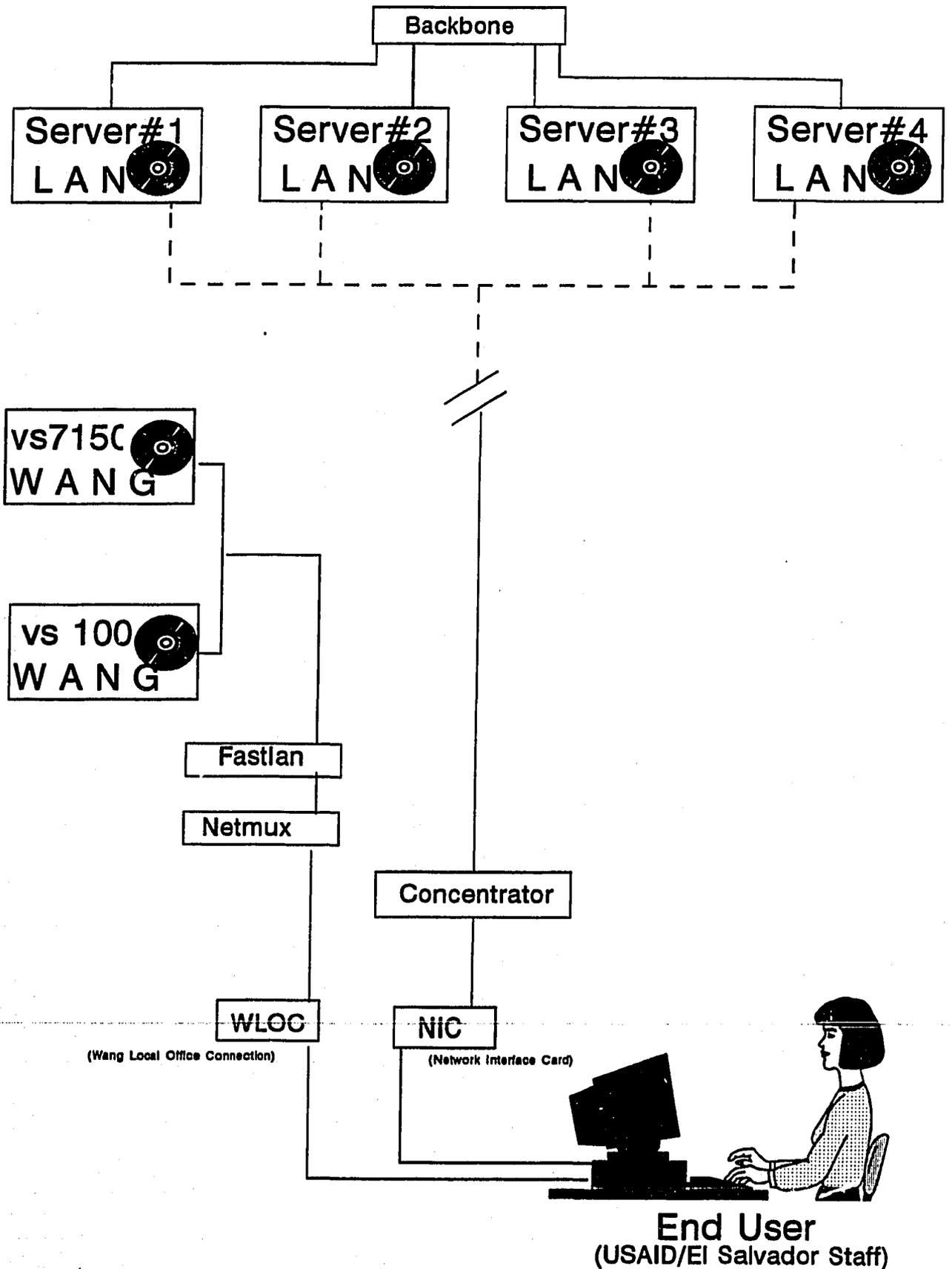
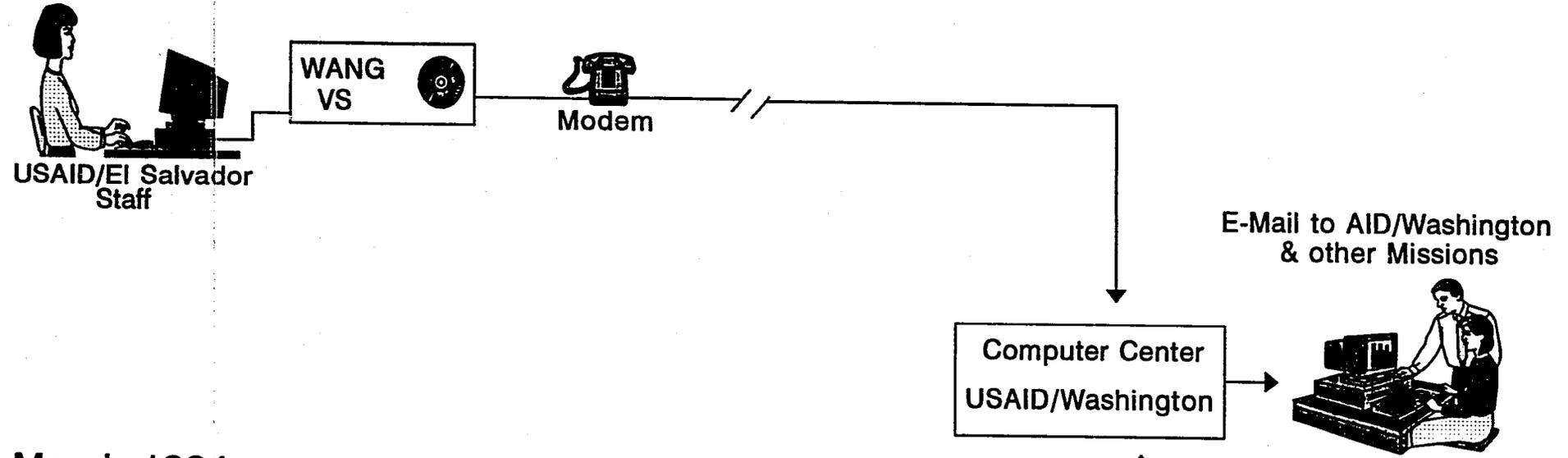
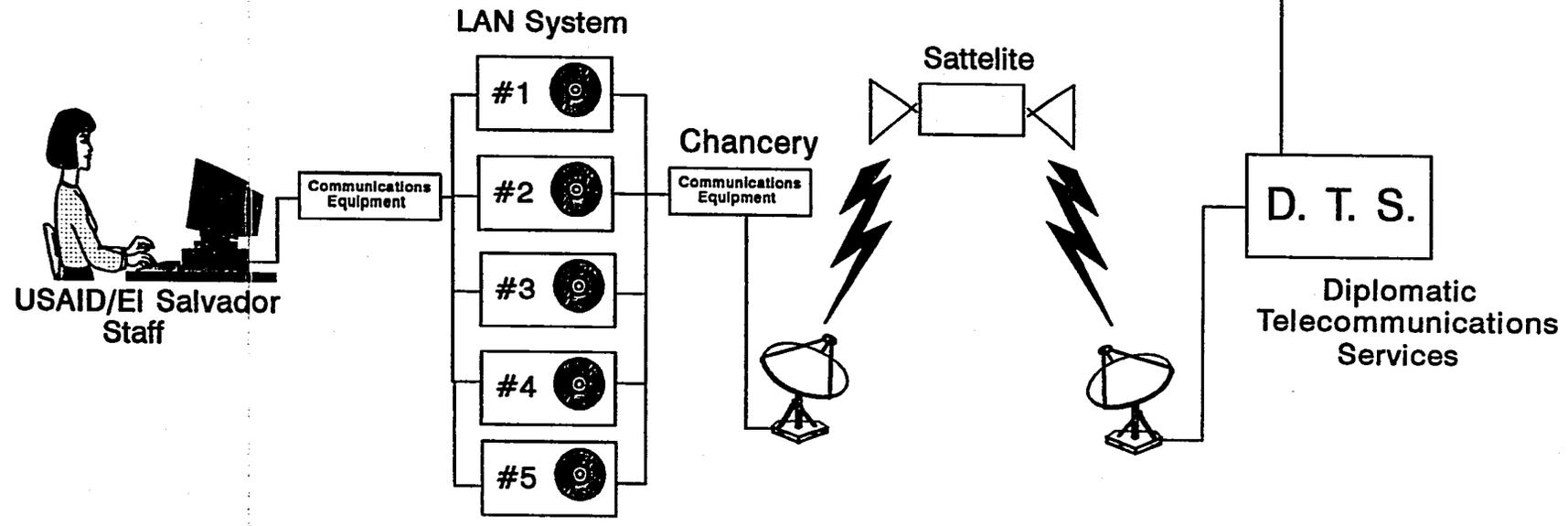


Figure XII: USAID/El Salvador Electronic Mail System

March 1993



March 1994



Methodology

"When a [cook] wants to test the quality of the soup she [or he] is making, she tastes only a teaspoonful or two. She knows that if the soup is thoroughly stirred, one teaspoonful is enough to tell her whether she has the right mixture of ingredients."

- George Gallup on the significance of proper sampling techniques
(Gallup 1983 p. vii).

As stated in the Scope of Work of this writer (see Appendix I), this report was to use as part of its guidelines, the information provided through a document titled: "*A Strategic Information Technology Planning Framework: Getting the Most From Information Technology*" by Janice Brodman, an USAID contractor from the Education Development Center (Brodman 1989). Appendix II provides a summary of Brodman's work. In addition, while reviewing background information for this study, this writer encountered other AID/Washington documents concerning, specifically, the headquarter's status of information technology and the methodology used to arrive at an Information Systems Plan. Those findings were summarized in the *Background Review Chapter* of this report.

Both Brodman and AID/Washington recommended the use of a team which would, inter alia, interview significant players or top managers of the organization. The ISP/Washington team interviewed such individuals within the USAID/Washington staff hierarchy in order to "discuss and collect comments about how to achieve two goals: 1. to establish corporate data that everyone could use, and 2. to build cross-organizational computer systems" (USAID/Washington 1993-d). The overall objectives were to "help Agency management gain control over corporate data; and to integrate systems in order to manage Agency information as a corporate resource"; i.e. *data control & integration* were the ultimate goals. Each interviewee was asked about his/her opinions regarding the type of "mechanism which could be used to:

- establish corporate data;
- build cross organizational computer systems; and/or
- establish effective collaboration on any project ... across many parts of the Agency"

(USAID/Washington 1993-d p. II-5-3).

Appendix III provides the questions used by the USAID/Washington team.

Apart from the USAID documents listed above, other guidelines used for this SITPLAF study were general research methodology and sampling techniques used in the social sciences. For example, Simon's *Basic Research Methods in Social Sciences: The Art of Empirical Investigation* (Simon 1978), and Gallup's views on sampling (Gallup 1983) were used as reference material. Based on the above guidelines and consultation with the CSD Manager, the immediate supervisor of this writer, it was agreed upon to conduct a series of interviews with USAID/El Salvador managers and base the outcomes of this report primarily on the information gathered through those interviews. To begin with, the tasks

Figure XIII:

SITPLAF's Outline & Time-Table

(Strategic Information Technology Planning Framework)

Components	Tasks	Beginning Date	Completion Date
<p>► Stage 1: Preliminary Research: Study of Documents, Clarification of Organizational Goals, & Assessment of Current IS Infrastructure</p>	<p>Study of Documents:</p> <ul style="list-style-type: none"> ▷ SITPLAF Manual ▷ General Research Methodology, ▷ New AID Strategic Papers, ▷ AID Strategic Information Resources Management Plan: FY 1992-97 (vols. I & II), ▷ AID Information Systems Plan, (Vol. I), ▷ AID-El Salvador Action Plan FY 94-95, ▷ Semi-Annual Reports, ▷ AID/El Salvador Information Systems Report, ▷ Inventory of IS infrastructure. 	Oct. 18, 1993	Jan. 14, '94
<p>► Stage 2: Formation of Draft Interview & Survey (Test Tool)</p>	<ul style="list-style-type: none"> ▷ Study of AID/W Information System Plan (Vol II), ▷ AID/ES Program Objectives Document FY '93-97, ▷ AID/ES Annual Budget Submission, FY 1995, ▷ Identification of SITPLAF Population and Sample Population, ▷ Identification of Parameters and Variables, ▷ Determination of Level of Aggregation, ▷ Creation of Organizational Chart. 	Jan. 17, '94	Jan. 31, '94
<p>► Stage 3: Formation of Final Interview & Survey</p>	<ul style="list-style-type: none"> ▷ Identification of <i>Sponsor</i>, ▷ Identification of Key Organizational Players, ▷ Sending of Sponsor-Memorandum to Divisions, ▷ Creation of Draft Survey, ▷ Conducting Test Interviews, ▷ Creation of Sample Population, ▷ Creation of Final Interview Questions & Survey, ▷ Scheduling of Interview Times. 	Feb. 1, '94	Feb. 18, '94
<p>► Step 4: Conducting of Interviews</p>	<p>Interview with individuals in sections:</p> <ul style="list-style-type: none"> ▷ DIR ▷ DDIR ▷ CO ▷ PRJ ▷ DPP ▷ ECON ▷ EXO ▷ CSD ▷ IRD ▷ PRE ▷ ANR ▷ HPN ▷ ODI ▷ OET 	Feb. 22, '94	Mar. 8, '94
<p>► Step 5: Analysis of Interviews</p>	<ul style="list-style-type: none"> ▷ Data Entry in d-Base IV, ▷ Creation of Draft Graphs, ▷ Formation of Draft SITPLAF Document Outline, ▷ Preliminary Results. 	Mar. 21, '94	Mar. 25, '94
<p>► Step 6: Writing of Final SITPLAF Report</p>	<ul style="list-style-type: none"> ▷ Writing and Charting of Results, ▷ Identifying Critical Success Factors, ▷ Listing of Recommendations & Final Options. 	Mar. 28, '94	Apr. 1, '94
<p>► Step 7: Presentation & Publication of Results</p>	<ul style="list-style-type: none"> ▷ Presentation to EXO Committee, ▷ Presentation to AID Automation Committee, ▷ Conveyance to AID/washington Information Management Committee, ▷ Final SITPLAF report given to ISP Manager. 	Apr. 5, '94	Apr. 6, 1994

which were to lead to the actual interviews, their analysis, and the written SITPLAF document were outlined in a time-table. Figure XIII (previous page) shows SITPLAF's outline with a detailed description of the *stages, tasks, and deadlines* of the study.

As seen in Figure XIII, the stages and *critical path*¹² of the study after some fine-tuning were determined to be the following: ▶1 background research on USAID, information technology, and research methods; ▶2 formation of interview questions (*test tool*); ▶3 selection of the *sample population* (interviewees); ▶4 conducting of interviews; ▶5 analysis of data; ▶6 writing of SITPLAF document; and ▶7 presentation of results to the CSD Manager, EXO, and the Automation Committee.

Originally, a survey on information technology on the issues of software, hardware, training, and user needs to be distributed to all USAID/El Salvador staff was also being planned. However, it was agreed that SITPLAF should only use the interviews as its source of data and leave a general survey or questionnaire on information technology for some later time. The creation, distribution, and analysis of such a survey will occur immediately after the termination of this report.

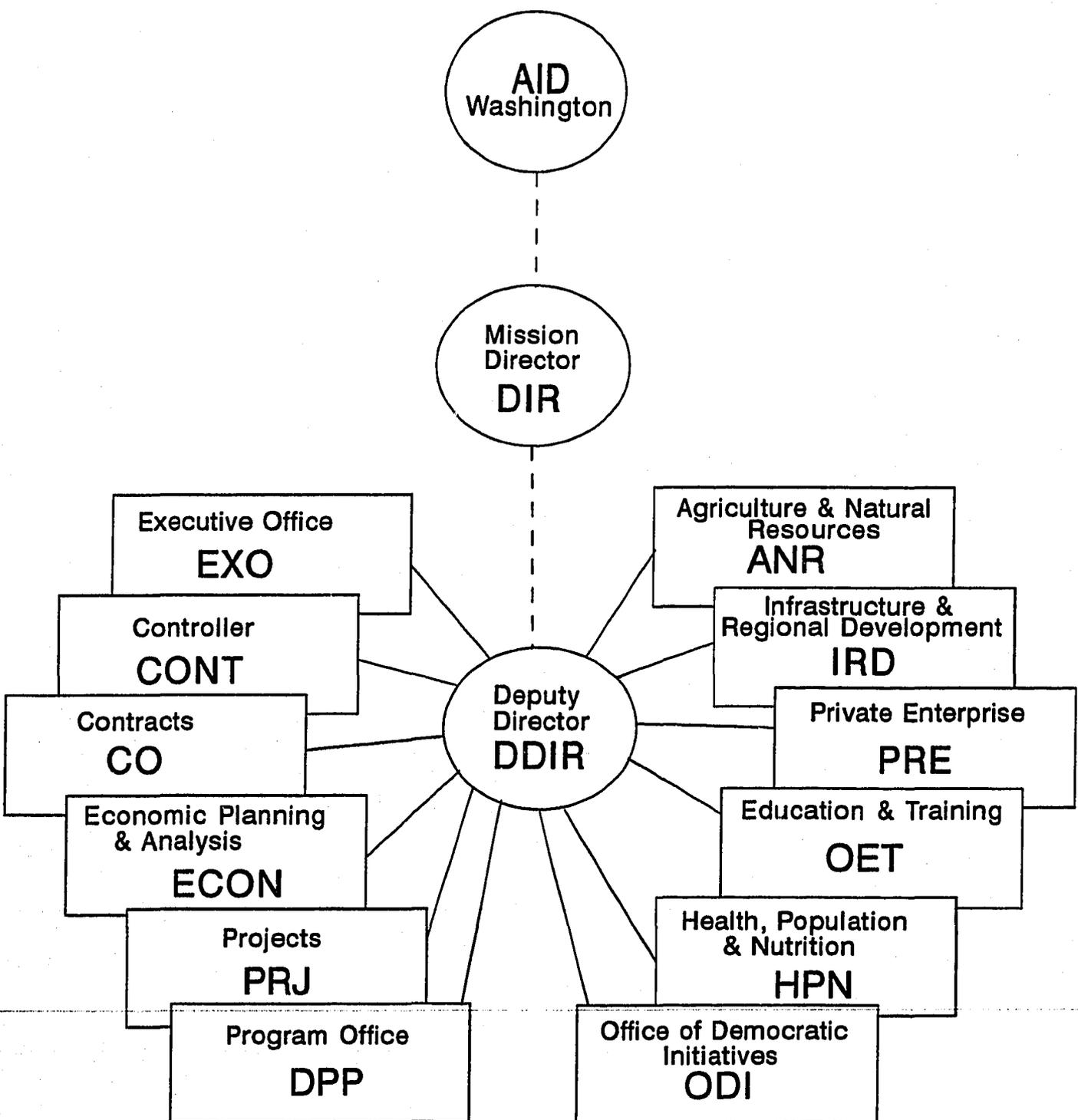
Stage 1 of the study required the study of background information on the objectives of USAID/El Salvador through its own documents and some other independent sources. This stage also involved familiarity with the existing organizational and information technology architecture of the organization. USAID/El Salvador's information technology architecture was described in Figure XI (page 19). Figure XIV (next page) shows USAID/El Salvador's organizational chart. As can be seen, USAID/El Salvador is composed of thirteen offices; six are *technical*, and another six are *administrative or supportive*. There is also the *Front Office* which is composed of the Offices of the Director and the Deputy Director.

According to Simon, a *universe or population* is the "group of people or objects in which" one is interested. Consequently a *sample* is a subgroup of the population¹³ (Simon 1978 p. 36). In this study, the population under study was the information technology end-users and major organizational decision makers who influence the direction and needs of the Agency. Since the SITPLAF study was to deal with strategy and planning, concepts which are typically developed at the high levels of any organization including USAID/El Salvador, the interviewees chosen (sample population) were from the high levels of the Mission, namely the Director, the Deputy Director, all office heads, and at least one other manager per office. Of the 31 interviews, one was done with a manager from and outside organization (FUSADES) which has close ties with AID. Determination of the study and sample population ended stage 2 of SITPLAF. The individuals selected as the sample population were chosen because "they strongly affect the organization's ability to achieve its goals" (Brodman 1989).

¹² *Critical Path* is defined as "a series of tasks that must be completed on time to meet the scheduled completion date" (Symantec 1990, p. 6-16).

¹³ Nourusis defines the study *population* as "the totality of all cases about which conclusions are desired", and the *sample* as: "the observations actually included in the study" (Nourusis p. B-118).

Figure XIV:
 USAID/El Salvador's
 Organizational Chart



In addition, they were chosen from at least two levels of the organization, upper and middle-level management. Furthermore, since end users are both of Salvadoran and American nationalities, care was taken to have a racially egalitarian sample population. Therefore, Salvadorans and Americans, each, represented approximately half of the sample. Because all upper-level management of USAID/El Salvador are Americans, the Salvadorans who were interviewed were all from the middle management level.

In forming the actual questions, aside from borrowing from AID/Washington ISP team's questions (Appendix III) and Brodman's outline (Appendix II), Gallup's concept of *open* questions was utilized. Open questions are such questions which allow the interviewee to express her/himself; for example, "What do you know about this problem?", "What do you think about it?", "What should [AID] do about it?", etc. (Gallup 1983 p. xxi). Furthermore, Gallup states that "no question, no matter how simple, must reach the interviewing stage without first having gone through a thorough pretesting procedure". Pretesting done through open-ended questions can make clear how much knowledge an interviewee has about an issue, "the range of views regarding it, and the special aspects of the issue that need to be probed if [and when] a series of [additional] questions is to be developed". In addition, pretesting can give the researcher a good idea about how well questions are worded. For example, if a given question continuously provokes the reaction "Will you read that question again?", it is unmistakable evidence that it is improperly worded (Gallup 1983 p. xxi).

Following Gallup's *pretesting* proposal, the first three interviews of the SITPLAF study were considered as *prototypes* during which the interviewees were encouraged to express their opinions regarding question wordings and comprehension. The questions which were to be used in the SITPLAF study ultimately surrounded the issues of shared or *corporate* data, cross-divisional computer system, ready-access to information, and issues surrounding software and hardware. After pretesting (which ended stage 3 of the study), the specific questions used were the following:

List of Interview Questions

- What is your job title in this division of the Mission?
- What are your specific responsibilities and goals?
- What are some of the activities taken to carry out those goals?
- What types of *data* or *information* does your office deal with and/or is your office in need of?
- Are current information technology and systems at your disposal supporting your activities and goals?
- What are the few pieces of critical information that your division needs in order to succeed in its activities? In other words, what are your division's *Critical Success Factors*?
- What are your feelings about the idea of sharing of data and information?
- Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. establishing *corporate* (or shared) *data* that everyone could use, and 2. building cross-organizational (in our case

cross-divisional) computer systems. How do you think USAID/El Salvador can go about the development of corporate data and cross-divisional computer systems?

- In your opinion, what are the most important data and/or information which should be readily available to all USAID/El Salvador staff?
- In terms of information technology, what do you think are the needs of USAID/El Salvador?
- What do you think should be included in the AID/El Salvador's computer system, in terms of software, hardware, or access to information?
- What should the role of the Computer Services Division (CSD) be? Should it be a *computer center*? An *information systems center*?
- Do you have any other comments regarding the topics discussed in this interview?

Stage 4 involved the actual interviews. The interview times were arranged at least a week in advance. With the permission of the interviewee, the interviews were audio-taped to be subsequently used in forming summaries and transcripts of the interviews. Out of the 31 interviews, only one interviewee had objections to the interview being taped.

Stage 5 entailed the task of summarizing, recording and analyzing the interviews. All the interviews were summarized and their summaries read. During that process, the frequent and significant points mentioned by the interviewees were stated in the form of recommendations. Those recommendations are in essence the final results of the SITPLAF study, recommendations which the ISP Manager, the EXO Office, and Automation Committee may choose to carry out.

Stage 6 was the actual writing of the report.

Stage 7 was the presentation of the SITPLAF study results in a meeting to the Automation Committee, EXO staff, the CSD Manager, and other interested USAID/El Salvador staff.

The following two chapters are the *Results* of the study: the *Transcripts/Summaries of the Interviews*, followed by the final *Recommendations*, both empirical (based on this writer's general observations) and based on the interviews themselves ■

Results:

Transcripts/Summaries of Interviews

The following are the transcript/summaries of the 31 interviews conducted with the top and middle management personnel of the USAID/El Salvador Mission. These interviews have been used as a major source of information for arriving at the final recommendations of this SITPLAF study. They begin with an interview with the Mission Director.

Date: February 23, 1994

Interviewee: Charles Costello

Title: Mission Director

Mission: USAID/El Salvador

● **Can you give a short description of the responsibilities of your office?**

Mr. Costello responded that as Mission Director most of his time is spent overseeing the portfolio of approximately 40 projects. His other responsibilities are the maintenance of contact with Salvadoran senior counterparts -both in the government and the private sector. In addition, he works with the Embassy on issues related to U.S. foreign aid. Mr. Costello added that part of his role is to convey the long-range goals of USAID/El Salvador to the Mission's senior staff.

● **Can you give us an example of a day to day activity which you undertake in order to meet the USAID objectives?**

Mr. Costello stated that his deputy or "Chief Operations Officer" meets with the Office Directors on a weekly basis. Mr. Costello referred to his own position as similar to the "Chief Executive Officer". He said that he, himself, also convenes with AID/El Salvador senior managers. In addition, twice a week he meets with the *Embassy Country Team* senior staff. He further noted that he makes an effort to make field visits and to meet with senior counterparts such as the Minister of Planning, President of FUSADES, Minister of Education, and chief-of-party contractors.

● **It appears that you are involved with issues which can be classified as *macro*. Are you happy with the types of information that you receive? And in your opinion, are the current information technology and information systems at your disposal supporting your activities and goals?**

Mr. Costello responded that the current information systems *do* meet his needs and support his goals. He affirmed that his role is to deal with the macro side of the organization and therefore he does not deal with much raw data and information or as pertaining to the short-run. His interests lie in measurements at quarterly and semi-annual levels such as financial reporting from the Controller's Office and the information from the *Semi-Annual Reports* (SAR) which the Project Management team puts together and contain "both narrative and financial information". The Project's Office also puts out quarterly updates on the SARs which the Director reviews.

● **What would you say your office's *Critical Success Factors* are, in general?**

The Director stated that USAID/El Salvador operates on a "strategic management framework". The five *strategic objectives* have their own "indicators which are used to measure their success not just on a project but also on the *program* level". Mr. Costello noted that the data involved with the indicators, therefore the status of the strategic objectives, are not being assembled on a regular basis. They are



reported on the annual *Action Plan* document which is sent to Washington. The establishment of the *strategic management teams* as part of the strategic management framework will enable this Mission to more closely monitor the status of the goals. The strategic objective teams are responsible for gathering the relevant indicator-data. Therefore, the information systems of the Mission should be formatted to aid those teams in their work. Mr. Costello added that : "... we try to take this program and make it more than just a collection of projects ... and turn it into an integrated program where we are *managing for results* and where we have ways of measuring our progress".

● **What do you think about the idea of *sharing of data* and what type of information do you think all the staff should have access to?**

Mr. Costello thought that sharing of information is a good idea and that the kinds of information that would ideally be shared by all staff here should be such data as the Controller's Office financial reports, the Project's Office SAR, and ultimately the data associated with the strategic objectives teams. In the long run, AID/Washington would like ready access to these information from its missions worldwide.

● **Would you like to see a system that would allow the staff at USAID/El Salvador access to the most recent reports such as the SAR through the computer network?**

Mr. Costello responded that he would, and mentioned that ideally the SAR document should be updated periodically and be readily available for viewing through the system. Furthermore, Mr. Costello added that there should be a means by which to monitor the progress of given projects as well, specially to be able to flag existing or upcoming problems.

● **Are there applications and features that you would like to see added to the current information system network of USAID/El Salvador?**

Mr. Costello responded that due to the nature of his job, he is not personally a heavy user of the system. However, based on the facility of his staff in providing him with information such as data related to "local currency programs" and "operation and yearly budgets (OYB)", he thinks the current system is functioning well. He mentioned, however, that since the senior staff are involved in a heavy schedule of meetings, an "electronic scheduling soft-ware" which would keep track of such meetings would be a helpful component. He said that he personally uses a program called *Cal-Lander* which keeps track of his schedule for up to three weeks. A program which would automatically contact individuals and arrange meetings would be very helpful.

● **What do you think of the idea of sending of *memorandums* through the system?**

Mr. Costello stated that there is no longer a need to send paper memorandums. He mentioned that they are wasteful in terms of paper usage and staff time, and that the E-mail system can satisfy those needs. "Obviously we should be moving towards the *paperless office* which is spoken about so much", he added.

● **What do you think the CSD's function should be?**

He replied that he would like to see a more comprehensive approach to computer systems management as related to the overall mission management task. He believes that more than just specialists within the Computer Services Division should be involved with the development of the information systems. One of the entities that should exist, in his view, is a committee of individuals in the Mission who are interested and proficient in the system's use and who would like to further develop the system and convey their knowledge to others.

● **Are there any other points that you would like to add regarding the issues we talked about?**

Mr. Costello stated that "lateral clearance" or "red tape", i.e. the act of circulating a document around the organization for approval of as many as 10 people, is highly time-consuming and inefficient. He suggested that an electronic system should be installed that would allow various offices to sign-off on a given document and be able to make their comments regarding the document through such a system

Date: February 25, 1994

Interviewee: John Lovaas

Title: Deputy Director

Division: Director's Office (DIR)

● **Can you give a short description as to the function of your office?**

Mr. Lovaas responded that he is the *alter ego* of the Director. He went on to say that his office is the last stop for all documents before they go to Mr. Costello. Mr. Lovaas also fills in for the Director when the latter is not available.

● **Would you say the *goals* of this mission are the same as the *strategic objectives* which have been laid out?**

Mr. Lovaas agreed with the said statement and included among the goals of his office the responsibility of "keeping the Mission in favorable framework" with AID/Washington and with the U.S. Ambassador in El Salvador.

● **Can you tell us some of the activities that your office undertakes in order to achieve those goals?**

Mr. Lovaas responded that there are two major activities: "1) Establishment of the objectives, and 2) Monitor and guide the implementation of all the programs which form the components of those objectives". He stated that that translates into *negotiating* the programs with the government of El Salvador, *approving* the programs which are drafted, and *reviewing* and *processing* the many information which go along with a program of \$900 million portfolio.

● **What type of data and information does your office deal with? Can you give us an example?**

Mr. Lovaas answered that his office deals with *summary* reports on the progress of Mission projects, evaluations, financial summaries of portfolio performance, and other summarized information.

● **If you could pinpoint three or four critical information that your office deals with, what would you say they are?**

Mr. Lovaas responded that the critical information that his office deals with are two-fold. One being information describing socio-economic problems of El Salvador. The other being the information that tell of the changes of the socio-economic status, information such as population and economic growth rates, inoculation data ... etc. These information are used to assess critical problems in El Salvador and USAID's effectiveness in solving those problems.

● **In your opinion, are current information technology and information systems at your disposal supporting your goals and activities?**

Mr. Lovaas answered that the current system goes far beyond his personal use. However, he added that the "information available to [him] is very poor", it being a problem of how and what type of

information and database is fed into the system rather than a system's problem.

● Last years, AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate* (or shared) data that everyone could use, and 2. Building *cross-organizational* (or in our case cross-divisional) computer systems. In your opinion, what are the most important data and/or information which should be readily available to and shared by all AID/El Salvador staff?

In response, Mr. Lovaas stated that access to AID/Washington-based data of comparable information from the various developing countries with AID missions worldwide would be useful. He added, however, that the "principle data-sets" of need to the Mission are Salvadoran, and that such information on the various development indicators of health, poverty, environment, etc. of El Salvador are examples of the primary data to the Mission. He added that such data could also be of use to AID/Washington.

● Do you think that the major reports that USAID/El Salvador publishes during the year, such as the Semi-Annual Reports or the Action Plans, should also be available through the system?

"Absolutely. ... With all that we invest in this system, it's remarkable how little we get... From the time I've been here, we've probably invested over \$3 million in [system] hardware and software", he said.

● Are there any other system components, functions, or programs that you would like to see offered by the Mission system?

Mr. Lovaas stated that Mission program data, specifically social and economic indicators, and information on Mission program portfolio should be available through the system; and that through the next few years the staff should be trained in their use.

● Should the role of the CSD be that (the training of the staff in the use of the system)? Are there any other roles it should play?

Mr. Lovaas responded that one of the roles of the CSD should be "the coordinating control point of the acquisition of hardware and software" both for administrative and program purposes. "The overall management of the system [should be one of its roles] ... [this overall management] seems to break down between the operating expense related and the project funding, and it shouldn't break down."

● As you know, information systems can produce a lot of paper. Currently the Mission is not recycling its discarded paper. What are your ideas on the topic of recycling in this mission?

Mr. Lovaas answered that he has promoted the idea strongly and to his knowledge the Salvadoran Employees Association was going to be responsible for it, with the idea that they would benefit financially simultaneously as the environment. He added that this would be the best arrangement since if the Mission was to sell its paper for recycling, it would have problems with the taking *in* of money - something it can not do according to U.S. law.

● Are there any other points that you would like to mention regarding the issues we talked about?

Mr. Lovaas stated that the information technology world can come up with a myriad of ways to spend on new systems. However, in his opinion, the job of this intern should be to come up with means to do things more efficiently. As an example, he mentioned that in the last approximately four years, USAID/El Salvador has spent about \$3.5 million on its system. "Does that strike you as a lot of money for the USAID Mission in El Salvador?", he asked

Date: February 24, 1994

Interviewee: Deborah Kennedy de Iraheda

Title: Office Director

Division: Democratic Initiatives (ODI)

● **Can you tell us, in short, what are the goals of your division?**

ODI manages the assistance program to strengthen the judiciary, the legislature, civil participation, labor unions, and overall encourages pluralism, tolerance and enduring democratic institutions with broad-based participation on the part of the Salvadoran people.

● **Is your role to oversee the above goals?**

Ms. Iraheda stated that ODI has a project portfolio consisting of ten projects with a total dollar value of \$50 million. It also assists other offices within USAID/El Salvador which have projects that impact on and promote democracy. For example, IRD manages a project of municipal development which has a component of public participation. Although ODI does not manage that project, it does participate in meetings which discuss the project implementation. Another example is that of the Controller's Office working on the Salvadoran financial sector accountability; ODI works with the Controller's with regards to the law which would have to be passed related to constitutional reform. Therefore, according to Ms. Iraheda, in addition to its own projects, ODI also assists other divisions on strategizing how their efforts could enhance the democratic process.

● **With regards to the above-mentioned activities, what sort of data and information does your office deal with?**

Ms. Iraheda stated that ODI deals with laws, regulations, census data (as concerning the elections of this year), and public opinion polls. She further noted that there are not a lot of academic publications on the field of DI; USAID/Washington periodically sends her office materials on the topic. She stated that her office augments those information with other technical information from various organizations. Ms. Iraheda went on to say that ODI has "inadequate access to information [on the field of democratic initiatives], some because we don't know what the sources are, and some because ... it doesn't exist and is evolving research".

● **If you were to pinpoint three or four activities which your division must do in order to be successful, i.e. its *Critical Success Factors*, what would you say they are?**

Ms. Iraheda stated that interpreting that question *externally*, ODI, with regards to the administration of justice, would like to broaden public sector support for modernization of the judiciary: "shifting from an externally-driven approach to one that is self-driven". In terms of the public participation, the critical success factor would be "enabling private sector groups to more effectively represent citizen interests and interact with government entities". Ms. Iraheda noted that because of the upcoming elections, for the time being most of ODI's efforts are to make sure of public participation by eliminating barriers from the process of voting.

● **You talked about how you would gauge your division's success externally, how about internally?**

Ms. Iraheda responded that in her opinion what needs to be done is a broader understanding in the Mission on how various projects -outside of ODI- can help the objectives of democratic initiatives. According to one ODI study, around 90% of USAID/El Salvador projects contribute, in one way or another, to the strengthening of democratic participation. She further stated that there exist "cross-

cutting issues" in the Mission; one being "*decentralization* which is critical to democratization", another being the idea of working with NGOs. The CSFs in general, therefore, are broadening understanding of the how Agency goals tie into democratic initiatives, and the promotion of collaboration among offices.

● **Are current information technology and information systems at your disposal supporting your activities & the goals of your division?**

Ms. Iraheda stated that ODI "is not a very computer literate office"-with the exception of Mr. Salvador Novellino. She continued by saying that ODI has not taken full advantage of existing technology, bringing the example that very few people in her office know how to use LOTUS or QUATROPRO, and that the technology in the Mission is adequate, but ODI staff are not technically familiar with that technology yet. According to Ms. Iraheda, for example, ODI does not have an individual to generate needed brochures and graphs. With regards to access to data bases, she stated that ODI acquires information from CDIE, which publishes a monthly newsletter and conducts research, *inter alia*, in democratic initiatives.

● **What are your feelings about the idea of sharing of data and information?**

She responded that ODI tries to share data with other AID offices and the public at-large. She went on to say that it depends on the type of usage that the individual has of the data. She stated that with a couple of exceptions, data *is* shared. It may not necessary be accessible in the way that people need it, however. Ms. Iraheda went on to say that if the data is sensitive, ODI limits it to usage within AID.

● **Last years AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate* data that everyone could use, and 2. Building cross-organizational computer systems. How do you think AID/El Salvador can go about the development of corporate data and cross-divisional computer systems?**

Ms. Iraheda responded that from the time that she joined USAID/El Salvador (1986), there has been talk on the idea of *common database*. The Programs Office was suppose to have had a contractor initiate the concept. The idea, however, never seems to have gotten off the ground. She went on to say that she has certain doubts about the type of data that would be needed by all the offices. She added that she is not sure if another technical office, such as ANR for example, would be interested in the amount of money allocated to or spent on ODI projects, or if they would be interested in the number of people who are voting. Ms. Iraheda stated that she could see hand-books or project profiles in the common database, but that when it comes to census data or data generated by the Mission, she has her reservations as to whether they should be available through the computer system.

● **In your opinion, do you think that at the moment any of the divisions are duplicating the generation of data -something that the creation of a common database could solve?**

She responded that they may be *ineficiencias* in the collection of data, as for example, if the Health sector is doing its survey, questions on, say, education could be added. In her opinion, there may be a possibility to cut costs, since Projects and DPP see all the orders for data collection, they should be the ones to oversee that no data generation is duplicated. In her opinion, there is not a problem with data duplication but rather in coordination -as stated above- that a given division, for example, could add some of their needed questions to another division's questionnaire.

● **Has your office generated any opinion polls?**

We contract public opinion polls to Gallup Poll and universities. There are also independent polls such as the ones by the Technological University and uca which ODI receives copies of. She pointed out that a recent U.S. academic study recommended that the Gallup polls generated for the Mission are

superficial and don't look at trends in depth.

● **In terms of information technology, what do you think are the needs of your division?**

Ms. Iraheda answered that in her opinion perhaps each office should be assigned an individual who is in charge of information generated for public consumption. She continued by stating that there used to be an individual in the front office who was in charge of generating professionally done briefing books. That capacity does not seem to exist at the moment with the Program office. Therefore, in her opinion, there should either be an individual assigned to each division or someone from the CSD who is on call and would be able to aid in the production of professional documents.

● **What should the role of the Computer Services Division (CSD) be?**

In her opinion, the CSD should be more *pro-active*; although they are very helpful when one encounters problems, they are not providing and showing the divisions the new technology -such as *Desk Top Publishing*, she stated. She went on to say that the CSD does training, maintenance and installation, and problem solving well, but it should provide more in terms of application development and new software programs: "why doesn't the mission have the translation program from English to Spanish?". Ms. Iraheda added that the CSD should be *client-oriented*, not looking at the Mission as its clients, but the outside world. Hence it should attempt to raise the quality of products that the Mission produces for the outside world through better computer technology.

● **Do you have any other comments regarding the topics discussed in this interview?**

Ms. Iraheda stated that perhaps when it comes to training, there should be a certification program for secretaries as to the level of computer proficiency

Date: March 2, 1994

Interviewee: Salvador Novellino

Title: Project Management Specialist

Division: Democratic Initiatives (ODI)

● **Could you tell us what your responsibilities are within the ODI division?**

Mr. Novellino stated that he is the Project Manager for the *Democratic and Electoral Process* project. The project involves the overseeing of the elections and the NGOs involved in *civic education*. The contractors involved are: *Creative Associates*, CAPEL (Inter-American Institute for Human Rights), and the *South West Border Research Institute*. His responsibilities involve overseeing activities regarding the elections and municipal development.

● **Can you tell us, as Project Manager, what your day-to-day activities are? For example, how do you deal with the agencies that you mentioned?**

Mr. Novellino stated that he is in daily contact with most of the contracting agencies through meetings, phone-calls, and correspondence which USAID procedures require.

● **What type of data or information does you deal with? Financial or ... ?**

Mr. Novellino responded that his work does not involve too many financial figures. All financial information relating to his project can be prepared by the CONT Office. He went on to say that the primary data that he is working on these days, for example, are figures such as the number of



individuals who have been registered to vote (*los carnetisadas*) in the March 20th Salvadoran elections. Mr. Novellino added that he deals with other similar type of information and graphics.

● **Are the current information technology and systems supporting your activities and goals?**

Mr. Novellino stated that he basically utilizes Wordperfect for his correspondence and LOTUS for storage of data and creation of "beautiful graphs!"

● **If you could pin-point three or four pieces or types of information that you would need in order to be successful at your project, what would you say they are? In other words, what are your *Critical Success Factors*?**

Mr. Novellino responded that in most cases he's dealing with *qualitative* information, which can not be easily demonstrated in a table format; for example, "how decisions have been changed throughout time". He added that, with the exception of some specific areas, "democracy is not something which you can measure by numbers." Another example would be to see if "women have been taken into account in decision-making processes." Mr. Novellino stated that he stores such qualitative information on Wordperfect files and tables.

● **What are your ideas on sharing of data and information?**

Mr. Novellino stated that information from other countries on the field of Democratic Initiative are very helpful for his division. He went on to say that sharing of information within USAID/El Salvador is also critical because under the Mission's Strategic Objective framework, all divisions' goals are related and should, therefore, be sharing information.

● **Last years AID/washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate* data that everyone could use, and 2. Building cross-organizational (or in our case cross-divisional) computer systems. What kinds of information do you think should be shared across divisions?**

Mr. Novellino responded that the minimum data that should be shared are the information related to the goals and strategic objectives of the Mission. He added that each strategic objective team produces data on indicators which are in term of use to the various projects. For example, he stated, that as part of his responsibilities he is in contact with international observers and they are sometimes in need of information on the status of the Salvadoran economy, or information on specific laws or the natural environment. Mr. Novellino added that these are all information relating to the Strategic Objectives and are helpful in presenting a clear picture of how the country is doing.

● **With regards to information technology, specifically hardware and software, are there anything that your division is in need of?**

Mr. Novellino stated that the addition of "d-Base would be great"

Date: March 3, 1994

Interviewee: Paul Hartenberger

Title: Office Director

Division: Health, Population, & Nutrition (HPN)

● **Can you tell us what type of information your office deals with?**

Mr. Hartenberger stated that HPN deals with a variety of data such as information related to the preparation of the SARS, and financial information which have to be reviewed with the Controller's office. He added that HPN also deals with assorted incoming management and technical information from AID/Washington.

● **What is your opinion on the current information technology and system at your disposal?**

Mr. Hartenberger stated that the technology has improved considerably after the transfer to the LAN system. He added that from what he has heard about AID/Washington, they are in the process of creating a database which will be accessible to all in Washington and USAID Missions worldwide. An example of such data-sharing in AID/Washington, according to Mr. Hartenberger, is that of financial information being imputed by the lowest level manager possible and then being accessible to others for the various analysis and uses such as preparation of the Congressional presentation. Mr. Hartenberger suggested that the same type of model that AID/Washington is attempting to create should be implemented here. He added that obviously he would be solely interested in the information which are relevant to his Office and the Strategic Objectives that HPN is involved with; otherwise, with the plethora of information which can be available, one could face "information overload".

● **What types of information do you think other Offices would want from HPN?**

Mr. Hartenberger responded that it seems like all Strategic Objective Teams have representatives from each of the divisions. One thing which is clear to him is that he would like to see direct communication and sharing of information through the computer system with the members of different divisions who are part of the strategic objective that he is working on. He would like his staff who are members of other Strategic Objective Teams, to also have access and be able to share information with their team members.

● **Of the documents and reports which USAID/El Salvador prints, which would you like to see available on the system?**

Mr. Hartenberger stated that it may be difficult to read whole reports from the screen, and it is also useless to receive whole reports -which one may not necessarily be interested in- as hardcopy. It is a waste of paper. He, therefore, suggested that the executive summary of the various reports be made available through the system and the staff be told as to where they can acquire the whole report if it is of interest to them.

● **Last years AID/washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate* data that everyone could use, and 2. Building cross-organizational (or in our case cross-divisional) computer systems. Do you have any more comments as to how a USAID/El Salvador system should look like?**

Mr. Hartenberger responded that the technical offices at USAID/El Salvador should be linked to AID/Washington through the LAN system. He added that because of the abundance of information which could be sent to a given office, Washington should be selective as of the information that would be sent.

● **Do you have any comments regarding the hardware, software, or in general any points regarding information technology?**

Mr. Hartenberger stated that he would like to see the upgrading of the system towards being user friendly and easier to access. He further noted that he has been attempting to acquire a software for presentations called *Story-Board* which Mr. Hartenberger feels is a better tool than Harvard-Graphics for creating graphics.

● **Do have anything else to add with regards to the issues that we discussed?**

Mr. Hartenberger emphasized the importance of the Strategic Objective Teams having access to each other through the system. He pointed out that much time is currently wasted when attempting to schedule meetings that everyone could attend. He added that efficiency could further increase if drafts of documents were sent to team members electronically for their review and approval

Date: March 3, 1994

Interviewee: **Guillermo Toledo**

Title: **Population Officer**

Division: **Health, Population, & Nutrition (HPN)**

● **What are your responsibilities within the HPN Division?**

Mr. Toledo responded that he is in charge of the *family health services project*. This is a project dealing with family planning and MCH (maternal child health-care). In addition, he has office responsibilities such as being the Acting HPN Director when the Director is on leave.

● **What are several activities which would be considered as your sub-division's *Critical Success Factors*.**

Family planning, child survival, dealing with sexually transmitted diseases, AIDS.

● **Can you give us an example of the type of activities that you do in order to achieve your goals?**

Mr. Toledo gave the example of the USAID activity of the distribution of contraceptives worldwide; he is the individual who is in charge of dealing with Salvadoran institutions who receive such devices. He also has to deal with the HPN Office in AID/Washington on this and similar issues.

● **What type of data or information do you deal with?**

Mr. Toledo stated that his office mainly deals with socio-demographic, health, family planning, nutrition, and logistics data -such as the stocks of a given commodity.

● **Are there some data that you are in need of and currently do not have access to?**

Mr. Toledo gave an example of the Salvadoran Demographic Association's contraceptive marketing program which sells contraceptives to pharmacies throughout El Salvador. There is a need to know information about the financial side of this program to determine the cost-effectiveness of the program. Mr. Toledo stated that he would like to create a database containing this type of information. He would also like to have a system for tracking the commodities which are arriving or are needed. As he put it, he is in need of a "*logistics database system*".

● **Are current information technology and system at your disposal meeting the goals of your division? What type of programs do you use?**

Mr. Toledo stated that whenever he's in need of specific data, he calls his counterparts who in turn send him hard-copies of the data requested.

● **What are your feelings on the idea of sharing of information?**

Mr. Toledo stated that since the far majority of the data he deals with are public, with minor exceptions, the data at his disposal can be "shared with anyone".

- Last years AID/washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate* data that everyone could use, and 2. Building cross-organizational computer systems. What are some of the data that you think all USAID/El Salvador can use?

Mr. Toledo stated that demographic data, and data on health indicators such as infant mortality could be shared. He also brought up the example of the 1982 census and how the ECON Office was given access to and how it took a long time before HPN could access the same data. He mentioned that a central location for such demographic data would be useful.

- Do you use the E-mail?

Mr. Toledo responded that he uses it quite often: two to three times a day with AID/Washington.

- What type of information technology are you in need of?

Mr. Toledo stated that he has been sent various CD-ROMs from Washington, but he does not have access to a reader. He stated that data contained in the CD-ROMs would allow him to compare and contrast health projects, similar to his, world-wide.

- What do you think the role of CSD should be?

He responded that the service is very good and that there should be more emphasis on *application development*. He also brought up the question of why the Windows software was purchased when the system is not compatible for it?

- The Strategic Objective Nº 4 of the Mission is "Healthier and Better Educated Salvadorans". Which one of the Program Outputs are you involved with and where can specific information technology help with this schema?

Mr. Toledo responded that his office is involved with the Program Outputs of *increasing contraceptive prevalence* and *increasing the number of Salvadorans receiving select health and child survival services*. He mentioned that a system which would allow his office to input the various information extracted from the public and private institutions' reports that HPN assists, would be good. This type of system should also allow for other offices within USAID/El Salvador who are involved in the Strategic Objective Nº 4 ability to access those information.

- Do you have any other comments regarding the issues we talked about?

Mr. Toledo stated that he would like to have access to a CD-ROM reader within his office

Date: March 1, 1994

Interviewee: Gordon Straub

Title: Office Director

Division: Agriculture & Natural Resources (ANR)

- Can you tell us, in short, what is the role of the ANR division?

Mr. Straub stated that soon ANR will be merging with Private Enterprise into what will be called the Productive Resources Office (PRO). He went on to say that currently ANR is sponsoring projects which have the goals of "increasing El Salvador's competitiveness in non-traditional agriculture" by "providing technical assistance, access to credit, and helping introduce Salvadoran products into new markets: things like specialty coffees, organic coffee, sesame, marigold, ... a whole series of non-

traditional agricultural products". Mr. Straub continued: "We are working with cooperatives, producer groups, to help them produce quality products for export". Mr. Straub added that ANR is also working with the Ministry of Agriculture in modernizing some of its programs such as the privatization of grain-cylo facilities -which are closed down at the moment and are being sold to private parties of producer groups and cooperatives. Up to 14 of such grain-cylos will be sold on the market. Mr. Straub added that ANR also works with the BFA, the Salvadoran National Agricultural Bank, in order to "continue with credit programs for producers [of] both basic grain and non-traditional agriculture". He continued that another role of ANR is helping the Ministry in gathering and analyzing data; data which are in turn used in making policy decisions related to areas such as "strategic reserves of grain" -as to when to export and when to import grain, pricing policies, etc.-, all being components of modernization. In addition, ANR is working in the field of natural resources primarily with SEMA (*Secretaría del Medio Ambiente*). ANR is involved in technical assistance, provision of strategies and policies, helping develop an environmental education program, and helping in the development of a demonstration site which would show the results of proper environmental management on peoples' income and production levels. ANR is also involved in the strengthening of environmental NGOs and "partially involved" with an environmental trust fund, CONAMA or *Consejo Nacional del Medio Ambiente*, which is the Salvadoran environmental fund created as a result of U.S. reduction of Salvadoran debt through the forgiveness of "almost all DA [Direct Assistance] and PL480 debt, about \$500 million." The remaining debt's interest payments, which the Salvadoran government is still obliged to pay, goes into a local currency account which is currently somewhere around \$40 million. That fund will be used to finance activities of NGOs working with the environment and natural resources. In addition to U.S. contribution, Canada and Japan are also putting money into CONAMA. CONAMA' board of directors are primarily of the private sector, four NGOs are represented (appointed by the NGO community), two Salvadoran government representatives and one representative from USAID/El Salvador, the Mission Director. ANR also works with a coffee technology project which has privatized the governments Coffee Research Center into another entity called *Pro-Cafe*, formed of thousands of paying coffee producers.

● **What types of data or information does your division deal with?**

Mr. Straub responded that ANR deals with a wealth of data such as data on annual production, data on export -both in terms of volume and value-, base-line on natural resource program (such as data on forest cover, deforestation, water resource management), etc.

● **Are these AID-gathered data or are they secondary data?**

Mr. Straub stated that they are of both kind. Much of the agricultural data are from the Ministry of Agriculture, where-as the base-line data on the PROMESA Project (Protección del Medio Ambiente Salvadoreña) is AID funded and generated.

● **In your opinion, are current information technology and information systems at your disposal supporting your goals and activities?**

"Yes."

● **What are the few critical information that your division needs in order to succeed? In other words, what are your division's *Critical Success Factors*?**

Mr. Straub responded that ANR is working within three of the Mission's Strategic Objectives: SO1) *Transition from War to Peace*, wherein ANR is concerned about the provision of agricultural credit to new producers through the land-transfer program, and the amount of land transferred; SO2) *Economic Growth*, wherein ANR is looking at the increase in production, incomes, and exports in non-traditional agriculture; SO5) Natural Resources and *Environmental Protection* Objective, wherein ANR is concerned

about the increase in the number of farmers applying sustainable agricultural techniques, amount of hectares of parks being protected, number of environmentally aware public, etc.

● **What are your feelings on the idea of sharing of data and information?**

"Just fine!"

● **Last years AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate* data that everyone could use, and 2. Building cross-organizational computer systems. In your opinion how should USAID/El Salvador go about the development of corporate or shared data?**

"I don't have any idea."

● **Let me re-phrase the question: What do you think is the most common data that all divisions within USAID/El Salvador could use through the computer system?**

Mr. Straub stated that his division uses, for example, some of the economic indicator type of data which the ECON Office puts out. However, he had his reservations on whether other divisions are interested in the same type of information.

● **Do you think that documents such as the *Semi-Annual Reviews* or the *Budget Submissions* or the *Action Plans* should be readily available through the system?**

Mr. Straub responded that those types of documents *are* available to everyone if not through the LAN system. He stated that he is not very computer-proficient and he therefore does not see the presence of those documents on the system to be of critical value. He mentioned that others in his staff may feel differently.

● **What do you think the role of the Computer Services Division should be?**

Mr. Straub stated that they have been of good help to him personally, although he has not yet been able to use the training courses. He added that CSD's role should be to keep the offices up-to-date and keep the "equipment up and running".

● **What are the Salvadoran sources of information for your division, i.e. what host-country institutions do you acquire information from?**

Mr. Straub responded that his division deals with SEMA, FUSADES, an agricultural division within FUSADES called DEVAGRO, the Ministry of Agriculture's unit of Policy Planning and Analysis, and also the USDA's office located near USAID's offices which provides a lot of information.

● **Are there anything else that you would like to mention regarding the points that we talked about?**

Mr. Straub pointed that he feels that USAID/El Salvador needs to be modernized, that in terms of information technology all should have direct access to printers, to color-printers, scanners, etc.

● **As you know, printers produce a lot of paper, what do you think about the idea of conservation and recycling?**

Mr. Straub stated that the ideal would be the *paper-less* office which in his view will never happen. However, he mentioned that there are a lot of irrelevant information and memos which are circulated to everybody. He stated that all irrelevant memos should be eliminated or given to the offices through E-mail, since everyone reads their E-mail several times a day.

● **It seems like there are a variety of training programs available to the staff, such as the**

upcoming women in Development (WID) training. What do you think of the idea of an Environmental training course for the USAID/El Salvador staff?

Mr. Straub stated that that would be a good idea. He further mentioned that Peter Gore has been in charge of spearheading the recycling program. He mentioned that the copy-machine in his division, alone, produces thousands of copies per day; an environmental awareness program as to the ways to reduce waste would therefore be a good idea□

Date: February 21, 1994

Interviewee: Rodolfo Cristales

Title: Project Manager

Division: Agriculture & Natural Resources (ANR)

● **What is your position within the ANR division?**

Mr. Cristales responded that he is involved with a number of projects: "a combination of both grants and local currency projects". These are the *Environmental Protection* and the *Salvadoran Non-Governmental Organizations Strengthening* projects. In addition, his department is following the debt forgiveness agreement between the United States Government and the Salvadoran Government. This agreement, inter alia, allow for the creation of the *Enterprise for Americas Fund*. The board of this enterprise will consist of the AID Mission Director, two members of the Salvadoran Government, and four NGO representatives. Mr. Cristales emphasized the significance of the environmental component of Mission projects and how every activity undertaken has an effect on the natural environment. He stated that as a result of the U.S. Congress's involvement with the issue of global biodiversity, the various USAID missions around the world began to implement environmental projects beginning three years ago. Currently, according to Mr. Cristales, all projects require an impact assessment analysis which includes an environmental component.

● **Can you in short tell us what specific types of activities are required to carry out your goals?**

Mr. Cristales responded by saying that each project has a *project paper* wherein the technical activities are described in detail including a grant agreement or participatory and joint-venture document detailing the requirements for the implementing parties. This is followed by the Action Plan which is tracked through quarterly and Semi-Annual Reports. For example, the PROMESA project has three components of *policy, legislation, and strategy* with the implementing institution being of Salvadoran Environmental Secretariat (SEMA). Part of the activities include the monitoring of legislation and laws necessary for environmental protection. Another project involves the Pan-American Development Foundation (PADF) -an AID contractor- which has the responsibility of strengthening Salvadoran environmental NGOs in the areas of fund-raising, design, and implementation of projects. ANR's role is to monitor that process.

● **What types of data or information does your office deal with or is in need of?**

Mr. Cristales stated that as each strategic objective has indicators, the strategic objective of environmental protection has an indicator of *forest cover*. Therefore, in this case, for example, ANR needs to know the number of hectares of forest cover which are maintained in El Salvador. A study using satellites will be used to measure that figure during a six year period. Another indicator is the awareness of the Salvadoran population about environmental problems. A Gallup poll is used to measure that indicator. For example, as part of this survey, individuals are asked to name four environmental problems facing El Salvador. The percentage of the sample population able to do that

should correspond to the percentage of the Salvadoran population who are aware of environmental problems. These in short are the type of data that Mr. Cristales' office deals with.

- **Are current information technology and systems supporting the goals of your division?**

Mr. Cristales stated that although his division uses the existing system, new software are being developed every day and specific applications are needed. Mr. Cristales also brought an example of the type of data that his office is in need of: about 11,500 ex-FMLN guerrillas and government soldiers have applied and/or have received agricultural land and assistance for farming. ANR is in need of a database which would track the various applicants and the type and amount of help they have received - such as amount of agricultural loan, technical assistance, and training.

- **What are the few critical information that your division needs in order to succeed in its goals? In other words, what are your division's *Critical Success Factors*?**

Mr. Cristales responded that it depends on the project and topic. In the line of credit, for example, there is need of knowing how many people have applied for credit, how many requests have been processed and approved, the type of loans, the repayment rates, the technical assistance, etc. Another example is that of non-traditional crops: critical information would be the amount of non-traditional crops being processed, amount of export, the amount of employment generated, etc.

- **What do you think are the *Critical Success Factors* of USAID/El Salvador?**

Mr. Cristales stated that participation and involvement of the local population is *the* critical success factor for AID projects. When a project is completed, its success or lack-there-of can be seen in whether the local population is carrying out activities which concur with the project goals.

- **Do you see any problems with the process of USAID programs?**

Mr. Cristales answered that in the last ten years, USAID/El Salvador has come to the conclusion that having contact only with government or private sector agencies is not productive. Reasons being that the government changes every five years in El Salvador, and private sector is bent purely on the profit motive. Hence, support and strengthening of NGOs has become and should stay as a critical element of USAID's development activities in El Salvador.

- **Last years AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* (or in our case *cross-divisional*) computer systems. How do you think USAID/El Salvador can go about the development of corporate or shared data?**

Mr. Cristales stated that during the project planning, design, and approval phase, there is a need for sharing of information. If this exercise is done electronically, it would facilitate and hasten the creation of project and other organizational documents such as the *Action Plans* which require data from all sectors of the organization.

- **In your opinion, what are the most important data and/or information which should be readily available to all USAID/El Salvador staff?**

Mr. Cristales replied that a document summarizing USAID/El Salvador activities meant for the use of the general public is needed. In addition, project updates could be made available through the system.

- **What should the role of the CSD be?**

In addition to maintenance, training, and expanded use of existing equipment, Mr. Cristales suggested that perhaps CSD could help in the creation of the above mentioned general document, summarizing the activities of AID/El Salvador in an informative yet simple style which the outside world, including



private and public institutions and individuals, could use.

● **Do you have any other comments regarding the issues which we talked about?**

Mr. Cristales stated that there probably are additional uses of the LAN and that special division-wide trainings, lasting for half a day, would be very helpful. He also emphasized the significance of trained secretaries and administrative assistance personnel □

Date: February 24, 1994

Interviewee: James 'Spike' Stephenson

Title: Office Director

Division: Private Enterprise (PRE)

● **Can you describe, in short, the goals of your office?**

Mr. Stephenson stated that his division is being phased out and incorporated into another: PRE will be merged with ANR to form a new division called *Productive Resources*. For the six years that he has been with USAID/El Salvador, the goals of the Private Enterprise Office have been three-fold: *to increase employment, increase foreign ex-change, and increase investments* in El Salvador.

● **Can you give us an example of the specific activities that your office carries out?**

Mr. Stephenson replied that PRE has acted on two levels. One being *policy dialogue*, i.e. ensuring that the proper policies necessary for the above said goals are in place in El Salvador. And the second is *institutional strengthening* in the areas of credit, insurance, and micro-enterprise development.

● **In general, what type of data or information does your division deal with?**

Mr. Stephenson stated that there are two types of data his division works with: one is information related to the status of the various projects which the project managers and administrative staff store on an in-house created word-processing program. The other is data and information which are project generated. PRE deals with other institutions such as FUSADES. There are data that the latter has and which are shared with PRE. Examples are data related to export and investment promotion and their subsequent results on the creation of jobs, investment, and foreign exchange. There are other data, for example, from the central bank on private investments, non-traditional exports, imports, and the status of *maquilas*.

● **You mentioned that you had created your own MIS system for use of your division? Are current information technology and systems, therefore, supporting the goals of your division?**

Mr. Stephenson stated that "a comprehensive *management information system*" is "non-existent in this mission". He mentioned that in 1988 he had proposed such a system to be utilized for the whole Mission¹⁴, and although an individual was assigned to that task, it was never accomplished. Mr. Stephenson added that currently various Offices and Divisions may have their own MIS system, but they are not using the same system. As an example, he mentioned that to his knowledge MID, NRD, and RUD each have their own MIS system, therefore, IRD as a whole, for example, does not use one system.

¹⁴ USAID/El Salvador. 1988. Action Memorandum for Director, MIS Working Group, J. Stephenson, editor, 10 pp.

● **What would you say are your division's *Critical Success Factors*?**

Mr. Stephenson replied that during the six years that he has been with the PRE Office, indicators of success and economic growth were the increase in jobs, foreign exchange and investments, in addition to increase in GDP and some policy changes. The current U.S. administration does not view "trickle-down" as a valid means of economic improvement. No longer is the PRE Office allowed to look for American clients who wish to invest in El Salvador and no longer is it allowed to help U.S. investors in that process. According to Mr. Stephenson, this change has also made the process of measurement of division goals difficult.

● **It appears that the PRE division is an office which is more directly and in an open manner promoting U.S. interests as compared with other divisions.**

Mr. Stephenson agreed. He added that it used to look as if the American investors whom the PRE Office dealt with were taking jobs away from American workers. Mr. Stephenson stated that his office dealt with businesses who were already making the move and that the role of his office was to persuade those same businesses to invest in El Salvador as opposed, for example, in South-East Asia. He mentioned that in that part of the world only 10% of every trade-dollar is with the United States, where as in Central America, that figure is more like 60%. Hence, even if jobs were to leave the U.S. for Central America, they would ultimately create other types of employment in the U.S.

● **What are your feelings about the idea of sharing of data?**

Mr. Stephenson stated that information should certainly be shared. He added that an information system database is only as good and detailed as the data with which it has been imputed.

● **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate or shared* data that everyone could use, and 2. Building *cross-organizational* (or in our case *cross-divisional*) computer systems. How do you think AID/El Salvador can go about the development of corporate data?**

In response to this question, Mr. Stephenson stated that: "We have a tendency to be data-junkies ... I would like to see somebody do this: *start from the premise that what it is [that] one needs*". He added that it would be difficult to know what we could do on the above issues if one doesn't know what are the information and data needs.

● **Therefore, rephrasing the question, what do you think are the type of data which all of USAID/El Salvador offices are in need of?**

Mr. Stephenson stated that there are certain information that he, as division head, needs which the Mission Director is not necessarily in need of. He brought up the example of the above mentioned MIS, developed in USAID/Egypt (Cairo), which produces up to 22 different reports depending on ones needs. Mr. Stephenson added that the type of data needed are *fiscal* (as of for example how much money was obligated and liquidated on a project) and *historical* (date of authorization, date of obligation, the manager's name, the contractor, date of project status, etc.). Condensed summaries of such information are what is known as the Semi-Annual Reports. The Cairo system can do all that.

● **What do you think is the role of the CSD?**

Mr. Stephenson stated that as the Head of a division most of his time is spent on running projects, hence leaving him little or no time for looking for software which are best suitable for his division's applications. He added that in the for-profit business world, a computer company would study his business and then attempt to convince him as to the benefits of a new system. That, he said, is the gap which exists here. Mr. Stephenson stated that the idea of Management Information Systems has to start off by asking the questions: "*What type of organization is USAID?*" and "*What is it that it exactly does?*"

He added that in the last 15 years, there's been a tendency to look at AID as a corporation, which Mr. Stephenson said, we are not. He stated that USAID is an uncommon organization; therefore, adapting an information system that would meet its needs of data-sharing would require close examination□

Date: March 4, 1994

Interviewee: Ana A. de Aguilar

Title: Project Manager

Division: Private Enterprise (PRE)

● **Can you tell us what are your responsibilities within the PRE division?**

Ms. Aguilar stated that since 1986 she has been in charge of the *export and investment promotion*, a program jointly run with FUSADES. That program had been one of the main projects of the PRE division; however, due to the new addition to the *Foreign Assistance Act* (section 599), her project will be terminated by the coming September. Now, U.S. law forbids USAID to be engaged in investment and export promotion. Another component of the PRE division is USAID/El Salvador project 5190287 or *Salvadoran Industrial Recovery* which deals with economic policy. This project in essence is the act of funding of non-agricultural and non-micro enterprise activities of FUSADES' Department of Economic and Social Studies.

● **What are a few critical information that your division needs in order to succeed in its activities?**

Ms. Aguilar responded that the information necessary for her division's success are primarily macro-economic data which are handled by the ECON division of the Mission: information on employment, inflation, interest rates, etc. Ms. Aguilar stated that those information are acquired by her office from the ECON office and FUSADES. She added that previously she used to receive information from the U.S. Department of Commerce on the breakdown of imports of Salvadoran goods to the U.S. Those figures were critical in demonstrating the progress of *maquila* exports from El Salvador.

● **Are the data that you receive in hard or soft-copy?**

"Hard-copy".

● **Are current information technology and systems supporting your activities and goals?**

Ms. Aguilar stated that one thing which makes working for AID interesting is the opportunity to learn about a variety of fields. She added that one can access various information in AID; however they are not readily available. Ms. Aguilar said that often one only finds about certain information in AID by total chance. Hence, she stated that it would be nice if the availability of information was in a more orderly fashion.

● **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing corporate or shared data that everyone could use, and 2. Building cross-organizational (or in our case cross-divisional) computer systems. In your opinion can USAID/El Salvador go about the development of shared data and cross-divisional computer system?**

Ms. Aguilar responded that in her opinion the availability of an excessive amount of information within the system may not be productive. As regarding the information coming out of her division, she stated that other divisions are not interested in the details of PRE projects, rather only in "the global figures".

● **What types of information would you like to have direct access to?**

"I would say the macro-economic figures". She added that macro-economic information are useful for all offices.

● **How about any of the major documents which USAID/El salvador puts out? Would you like to have access to those through your terminal?**

Ms. Aguilar said that access to a document such as the *Action Plan* would be of great help specially now that the Mission is utilizing the Strategic Objective methodology. The study of the Action Plan would allow the various offices to concentrate on those goals and not loose focus of the Mission's objectives.

● **What do you think the role of the Computer services Division should be?**

Ms. Aguilar responded that the CSD should be periodically up-dating the system and inquiring if divisions are in need of additional technical support.

● **With regards to the issues that we talked about, are there anything else that you would like to add?**

Ms. Aguilar stated that one problem that had arisen with her project in dealing with the Controller's Office and FUSADES was that the two were using two different accounting systems, making it difficult to access and exchange information. Often, she stated, PRE's financial figures for projects did not match with those of FUSADES'. She stated that it would be very helpful if there were "standardized [accounting] systems" which would allow the "access of information back and forth" between PRE, Controller's and FUSADES or other agencies which USAID/El Salvador deals with

Date: March 16, 1994

Interviewee: **Ronald Witherell**

Title: **Special Advisor for the National Reconstruction Program ¹⁵ (PSC)/ Acting Office Director**

Division: **Infrastructure & Regional Development (IRD)**

● **Can you tell us, in short, what are the responsibilities of your office?**

Mr. Witherell responded that the office of IRD in El Salvador was created as a response to the civil war of this country. IRD has the three divisions of: Major Infrastructure Development (MID), Rural & Urban Development (RUD), and National Reconstruction Division (NRD). The IRD Office of USAID/El salvador is larger than many AID missions. IRD/MID has been funding major and minor infrastructures such as the provision of spare parts for various public utilities. By the post war years, the program began to involve reconstruction and rehabilitation, at times with the Inter-American Development Bank and the World Bank. In addition to major infrastructure, IRD has been funding minor infrastructures of small towns and villages. This was as a result of not seeing results through the government of El Salvador due to their lack of investment budget. IRD has also been involved with displaced Salvadorans (people who are refugees within their own country; as a result of the war, there have been up to ½ million displaced El

¹⁵ The Government of El Salvador's National Reconstruction Program (NRP) has four main objectives: 1) the reintegration of ex-combatants and the severely affected civilians back into productive life; 2) the improvement of social, economic and environmental conditions in the most war-affected areas; 3) the reconstruction of damaged and destroyed infrastructure; and 4) the promotion of participation of all parts of society into the effort of national reconstruction (Washington Office on Latin America 1993 p. 3).

Salvadorans)¹⁶. Further involvement of IRD are in *grass-root democracy* and *decentralization*. Mr. Witherell added that IRD/NRD has two functions: It works on projects that it sponsors along with the Secretariat of National Reconstruction (SRN). It also functions as a coordinating center for existing projects who may have components in national reconstruction.

● **What type of data or information does your division use?**

Mr. Witherell stated that although the *Mission Accounting and Control System* (MACS) is primarily used by the Controller's, IRD at times utilizes it in order to find financial information on projects. The various offices and divisions have also developed their own databases and project tracking methods. For example Rafael Pena of IRD/MID has created a system for a major project dealing with the Ministry of Public Works regarding finance and procurement of commodities within the project.

● **From where are the data obtained and what type of data and information does the Office Director deal with?**

Mr. Witherell answered that data are obtained from both non-governmental sources (NGOs and AID contracting companies) and governmental sources (such as SRN). The Office Director does not deal with the raw data and mostly looks at reports written by Division Chiefs. Currently IRD is working on producing a cross-divisional information system. Mr. Witherell added that the flow of information from the divisions to the IRD main office has not been adequate.

● **Do you think there is a need for a non-financial information system?**

Mr. Witherell agreed and stated that the MACS system provides purely financial data; it, for example, wont provide information regarding the number of schools built, etc.

● **How often are fiscal and historical data updated?**

Mr. Witherell responded that the Controller's accounting system updates the money which is "reserved, obligated, and then is free for use". There's also the *accrual* expenditures system which allows for the recording of expenditures only when the task is accomplished. The financial data, therefore, is constantly updated.

● **What role should the CSD be playing? Should it be involved with financial and historical data?**

Mr. Witherell stated that the financial programming has already been institutionalized by USAID/Washington. The role of CSD should be more in the technical side of the information systems technology. Problems exist with regards to the introduction of new programs and applications. He added that IRD has contracted someone to put its database together

¹⁶ The civil war resulted in more than 75,000 deaths, half a million people displaced from their homes, and close to one million cases of forced emigration (Washington Office on Latin America 1993 p. 43).



Date: February 18, 1994

Interviewee: Marvin Dreyer

Title: Section Chief (NRD)

Division: Infrastructure & Regional Development (IRD)

Sub-division: National Reconstruction Division (IRD/NRD)

● **What is your position within the IRD Office?**

Mr. Dreyer responded that he is a Section Chief within the IRD office, NRD division, in charge of the areas of *training, health, and education*.

● **What are the goals of your division?**

Mr. Dreyer referred to the listing of USAID goals of *sustainable economic growth, environmental protection, population stabilization, improved health, and building democratic initiatives*. He mentioned that the goals of the National Reconstruction Division -established in 1992- are to apply the said objectives towards El Salvador's transition from war to peace.

● **You mentioned that you are a Section Chief within the NRD division; what are the responsibilities associated with your position?**

"I coordinate and assist in developing Mission activities related to health, education and training in about half of El Salvador". Mr. Dreyer added that the programs he is responsible for are to ultimately affect the income of the Salvadoran people, including ex-combatants. Micro-enterprise development is among the training for such a program. In the area of health, within the ex-combatant areas, focus is to assist the war-wounded. The overall goals of the training and health programs are to increase people's income in the long-term, and allow the war-wounded to re-integrate into society.

● **Is there a relationship between your office and the OET division?**

Mr. Dreyer's answer was affirmative. He added that his division is also in close connection with the HPN division. Some training specialists and physical rehabilitation specialists hired by the OET and HPN divisions are funded through an IRD/NRD project. He also mentioned that among the team-members of the said projects, in addition to his staff, OET and HPN staff are also present.

● **What types of data or information does your office deal with or is in need of?**

Mr. Dreyer stated that his office mainly deals with and produces documents. He added that there are data relieved from the Salvadoran government on the number of people trained, employed, and assisted through IRD/NRD projects.

● **Are current information systems and technology supporting the goals of your division?**

Mr. Dreyer responded by saying that his division has hired a *data management specialist* with the task of, *inter alia*, sending and receiving of data from NRD's principle governmental counterpart. This is to be done through a modem. Mr. Dreyer stated that the technology that his office needs are available both in terms of software and hardware; however, in some cases -such as the usage of a modem for transmitting and receiving of information from counterparts- it is not in place yet.

● **What are the few critical information that your division needs in order to succeed in its goals? In other words, what are your division's *Critical Success Factors*?**

Mr. Dreyer brought the example of a project he manages regarding the *demobilization of ex-combatants and national police*. He stated that a critical information is the number of such individuals who have applied for various services such as counseling, training, and credit at any given time. Currently this information is received through phone conversations with pertinent agencies; those are the critical data that Mr. Dreyer needs for the said project. In his opinion the gathering of such data by conventional means is appropriate; however in the process of accumulation and storage of such information is where information technology is useful.

● **In your opinion, what are some *Critical Success Factors* for USAID/El Salvador in general? In other words what are some the activities that USAID/El Salvador could be doing well in order to be successful in its mission?**

Mr. Dreyer responded that the basic goals of USAID should be considered as its *Critical Success Factors*. He went on to say that the goals of USAID/El Salvador have changed throughout the years, and that some of that change has made the government of El Salvador uncomfortable; for example, USAID's assistance to NGOs is not looked very favorably by the government.

● **What are your feelings about the idea of sharing of data and information in general?**

Mr. Dreyer stated that his division has been sharing information for a while now, including a LAN-based calendar system to book appointments and make the division head aware of the activities of his staff. He emphasized that he is very much in favor of data-sharing.

● **How do you think USAID/El Salvador can go about the development of corporate data?**

Mr. Dreyer's answer was that as one leaves the circle of the sector, then the division and then the office, less and less information is necessary to be shared with others. However, Mr. Dreyer did give the example of his sector's need to share data with the main office of IRD and the HPN Office, something which is currently being done through hard-copy. He brought up the issue as to whether the ability of transferring data across offices electronically would be "cost effective" or not.

● **Do you think there are certain data or information that all the offices and divisions of USAID/El Salvador are in need of?**

Mr. Dreyer stated that there are certain "dummy" documents such as project invitation letters which could be shared. He added that because of the nature of his office, there are information from other offices that he is interested in, but he doubts that Offices in general are much in need of cross-divisional or cross-official¹⁷ sharing of data and information.

● **How about *Semi-Annual Reports* and *Action Plans*; do you think they should be available through the system?**

Mr. Dreyer responded that if the availability of those documents are only for viewing rather than manipulation, then it is a good idea.

● **In terms of information technology, in general, what do you think are the needs of USAID/El Salvador?**

Mr. Dreyer noted that the E-mail system currently in place is very useful. He added that perhaps its uses can be expanded by adding an electronic USAID worldwide directory and further means of sending data. He also added that scanners should be made available to offices. His other ideas were further

¹⁷ Mr. Dreyer cleared a point for this writer that USAID/El Salvador has twelve offices, each office having divisions, and some divisions having sectors. Mr. Dreyer, for example, is a Section Chief of the NRD Division of the Office of IRD. Never-the-less, in this report-viewing USAID/El Salvador from a generic organizational perspective, I have used the terms office and division interchangeably, and have referred to sections as sub-divisions.

electronic storage of information as opposed to hard copies and the ability to make faxes through one's computer terminal rather than the current technology which requires a hard copy.

● **What do you think should be the role of the CSD?**

Mr. Dreyer stated that he finds the CSD to be very helpful and further went on to say this regarding their role: "I think that they should understand our information needs and be very aware of information technologies, and be advocates to marry the two" □

Date: March 25, 1994

Interviewee: **Raymond Lynch**

Title: **Program Advisor (NRD)**

Division: **Infrastructure & Regional Development (IRD)**

Sub-division: **National Reconstruction Division (IRD/NRD)**

● **After this writer had explained what the SITPLAF study entails, Mr. Lynch in tern stated the following regarding his division's information system:**

He stated that his division, IRD/NRD, has already developed a database. That data-base is based on FOX-PRO and there are plans to introduce the same system to the host-country government agencies in order to facilitate the exchange of information. Mr. Lynch added that the IRD/NRD database is meant to act as a management tool for storing and recalling of financial data, information from SRN, notes from the trips to project sites, and further reports from SRN on the status of program indicators. Mr. Lynch stated that the significance of such a management tool is in the gathering of information from the more than 40 or 50 agencies which may be working within the same national reconstruction project.

● **Besides the information technology that you've already mentioned, such as FOX-PRO, do you think that the current information technology provided by USAID/El Salvador are serving your goals?**

Mr. Lynch stated that, for example, the availability of MOMS or in the future the USAID handbooks through the computer system is very helpful.

● **As Program Advisor, is your primary responsibility to work with the MIS system which is being created?**

Mr. Lynch stated that he also works with several IRD projects and is the representative of IRD on the Automation Committee.

● **What are the types of data that you deal with?**

Mr. Lynch gave the example of *credit programs*. He stated that the database created by his division would be able to pinpoint which geographical areas within the country work with credit programs, what the results of previous visits to those regions have been, what the indicators for a particular projects are, etc. He further added that field visits by other Offices may also be found in the IRD/NRD database, since several Offices are working on the National Reconstruction Program. Mr. Lynch added that his division is planning to put out monthly progress reports on the status of the National Reconstruction Program.

● **It seems that you are dealing with a lot of qualitative or historical data; is that true?**

Mr. Lynch agreed and stated that the National Reconstruction Program is a \$300 million portfolio with a plethora of entities involved. He added that the portfolio deals with 25 main institutions each of which may be dealing with a further 25 or so institutions and NGOs. For example, CRS (Catholic Relief Services -an NGO) dealt with 25 other NGOs, whose updates are stored in the IRD/NRD MIS database.

● **What are the three or four types of information without which the project is not successful?**

Mr. Lynch responded that one would be *financial information*; information such as the amount of money advanced to a given institution, the disbursements, and the amount liquidated. These type of financial information are "key ... a sort of indicator to see if the program is moving". The other critical information are the "feed-back and the *field reports*", i.e. are the goals being accomplished, are the projects being visited and the institution reports reviewed. The two mentioned elements, according to Mr. Lynch, are the two critical pieces of information necessary for the successful monitoring of the project.

● **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* (or in our case *cross-divisional*) computer systems. What are your ideas on an USAID/El Salvador-wide data-sharing system?**

Mr. Lynch said such an organizational wide system would be ideal. He gave the example of the Ambassador or a visiting staff wanting to make a trip to the northern part of the country and observe AID-funded credit activities. He stated that: "It would be nice to have a *central-house* ... with information on what PRE is doing in credit, what NRD is doing in credit, and what ANR is doing in credit, and be able to put that information together very quickly and be able to plan trips". He added that an agency-wide system would also be useful for reporting activities, for example, during the creation of the SARS or the Strategic Objectives or when AID/Washington requests a certain type of information -which, according to Mr. Lynch occurs quite often.

● **Are there much requests for information by other offices from your office?**

Mr. Lynch stated that the other way around is more common, that is, for IRD to ask for information from other offices. The only information which other offices usually ask form IRD/NRD is financial data due to the fact that "insolvent funds" are all in the 394 project which Mr. Lynch's division is in charge of. Other areas which divisions such as PRE or OET are interested in are training and credit which NRD is involved in.

● **If there were to exist a data-bank for all USAID/El Salvador, what do you think its critical functions should be?**

Mr. Lynch stated that a primary use of such a system would be during the creation of new projects. A system which could tell one as to the activities which are currently in place for a given part of El Salvador would be of immense use. Mr. Lynch stated that such a system could tell one, for example, if there are parts of the country which no USAID programs are functioning.

● **Hence, do you think that a USAID/El Salvador-wide system should give us the option of looking at specific prefectures and municipalities?**

Mr. Lynch stated that a system based on geographical division is fundamental. He added that the IRD/NRD system can look at the activities which are in place in a given municipalities (smaller geographical entities are *cantones*, *casarios*, and *haciendas*). Mr. Lynch added that IRD/RUD's system functions on the basis of municipalities.

● **In terms of information technology, do you see additional hardware or software that you are in need of?**

Mr. Lynch responded that in his opinion, "the Mission needs some type of agenda program". He stated that his division has bought the Cal-Lander program which allows a smooth computerized scheduling or rescheduling of meetings and the assignment of tasks. This program was recommended by the office of the IRM in AID/Washington. Mr. Lynch added that he would like to see this type of program to cover all the Mission staff. He mentioned that *Action Plan* meetings which are required for the SRN proposals for funding new projects require the presence of various offices of AID such as CO, DPP, PRJ, and the appropriate technical offices. The coordinating of a meeting time appropriate for all the participants is currently very inconvenient. An agency-wide application of a program such as Cal-Lander would facilitate the process.

● **Would you like to see various key documents that USAID/El Salvador puts out be available through the computer system?**

Mr. Lynch responded that when it comes to certain mission documents which DPP or PRJ put out regarding the projects which he is involved with, it would be helpful to have access to them through the system.

● **Is your division attempting to install the FOX-PRO system that you mentioned in the various agencies that you deal with?**

Mr. Lynch stated that FOX-PRO seems to be the most acceptable program in El Salvador, more than d-Base or others. And since IRD/NRD and SRN track the same projects and activities, Mr. Lynch's division is attempting to install that system in the SRN offices.

● **What do you think the role of the Computer Services Division should be with regards to the issues that we talked about?**

Mr. Lynch stated that the responsibilities of CSD should be 1) maintenance of the system, 2) support of the various types of applications of the different offices, and 3) on-going training on new computer applications.

● **Are there anything else that you would like to add?**

Mr. Lynch stated that he would like to see a time-table created by the CSD as of the up-coming activities such as training schedules, the availability of CD-ROMs, or the new applications of the LAN□

Date: February 23, 1994

Interviewee: Aldo Miranda

Title: Deputy Coordinator

Division: Infrastructure & Regional Development (IRD)

Sub-division: Rural & Urban Development (RUD)

● **Can you tell us in short what are the goals of your division and sub-division?**

The goal of IRD Office, according to Mr. Miranda, has been to rebuild structures that had been damaged by the war. However, now there are also projects involving *new* infrastructures. The sub-division of RUD has the responsibility of both building the physical infrastructures -about 3,000 projects



a year- and to promote popular participation and democracy within the Salvadoran municipalities, the latter being RUD's major goal. Those activities have been going on for the past seven years now.

● **What is your role within IRD/RUD?**

Mr. Miranda responded that in the absence of the Sub-Division Chief, he is given his responsibilities. He works with five technical staff to oversee projects and also act as an advisor to the *Secretaría Nacional de la Reconstrucción* (SRN) regarding project accounting, auditing, procurement, etc.

● **What type of data or information does your office deal with?**

Mr. Miranda said that his office deals with a variety of data anywhere from financial to historical. They include, inter alia, data such as type and location of projects, the amount and time of issuance of checks, and data on municipalities such as name of mayors, years in power, political affiliations, percentages of votes received, number of open-town meetings attended, income of municipalities, expenses of municipalities, number of *cantones* (sub-division of municipalities), total kilometer of roads repaired, ... etc.

● **How are the type of information that you mentioned stored and maintained?**

Mr. Miranda responded that the information have customarily been imputed into LOTUS files, but that a new program called FOX-PRO has been purchased and it seems to fulfill his office's needs for information better.

● **It seems to me that some of your sub-divisions's goals and activities are the same as the Office of Democratic Initiatives. Is that true?**

Mr. Miranda stated that there indeed is an over-lap between the Offices of IRD/RUD and ODI, and the point has been debated before as to whether they should be merged. Mr. Miranda added that there is sharing of data between the two offices and that the two share the third Strategic Objective of USAID/El Salvador, it being *promotion of enduring democratic institutions*.

● **Are current information systems and technology supporting the goals of your division?**

To this, Mr. Miranda responded that there exist sufficient technology to meet their needs. However, that there is not a specialist within the IRD/RUD sub-division that would manage the immense data and information that his office currently is in possession of. He mentioned that Ms. Maritza Molina -who works as a information systems specialist for IRD/NRD has at times helped them with their data management. Mr. Miranda added that there are so much information to be analyzed and managed that a full-time specialist is needed.

● **What do you think your division's *Critical Success Factors* are? In other words, if you could pin-point three or four sub-goals for your office, what would you say they are?**

Mr. Miranda's response was: 1) To increase the number of people participating in open-hall meetings. Currently that number stands at 62% nation wide; the goal is 90%. The way to achieve this is to spend more time in the field with the mayors in order to convince them of the significance of democratic participation. 2) Rapid access to necessary data. Mr. Miranda gave the example that if he is planning field-trips for a given day, he would take at least an extra day to gather and find the vital information necessary for the trip from different sources. He thinks that this process can be substantially improved by the proper information technology. Mr. Miranda noted that institutional contractors are also in need of these data. 3) Support on policy dialogue from the Front Office in their ability to lobby the Salvadoran government. For example, at the time IRD/RUD is attempting to convince the municipalities to pass a property tax as a means of generating local government income. This goal can be accelerated with intervention and support of the Director's Office.

- **What are your ideas on the concept of sharing of data and information? What types of data are you willing and what are you not willing to share with other staff?**

Mr. Miranda stated that the sharing of data is critical if the Mission wants to work as a whole. He brought the example of information for a given municipality which his office may have and which could be of use to, for example, the ANR Office as well. He added that unfortunately too often various offices are doing their own thing and data are not being shared. He noted that all care should be taken not to duplicate the gathering of data which are already "in-house".

- **In your opinion, what are the type of data that all offices within USAID/El Salvador could share?** "Geographical and statistical data of the whole country *by municipality* -since they are the smallest governmental unit."

- **Are there anything which you think should be added to the current information technology of USAID/El Salvador?**

Mr. Miranda thought that the technical equipment available to the Mission were more than enough. He did think, however, that more emphasis should be put on training. He thought that there is a need for advanced computer courses such as advanced LOTUS, and new computer applications such as FOX-PRO

Date: March 16, 1994

Interviewee: Maritza Elizabeth Molina

Title: Information Systems Specialist

Division: Infrastructure & Regional Development (IRD/NRD)

- **Could you tell us as to your responsibilities within the IRD/NRD Offices?**

Ms. Molina stated that her job as a contractor is to create a management information system which the various divisions of IRD and the Salvadoran institutions associated with them such as SETEFE, SRN, COMURES, ISDEN, OCTA, Banco Tierras and others could use and be able to facilitate the exchange of information among them. She mentioned that her work, through easier provision of data and information, helps in accelerating the writing of the semi-Annual Reviews. Her responsibilities also include the formation of a database of financial information, data on geography and municipalities, and project information.

- **What type of programs or softwares do you use?**

Ms. Molina stated that the majority of her work is done on FOX-PRO. Others are done on LOTUS and Harvard Graphics.

- **In your opinion, what kinds of information should be shared by all USAID/El Salvador offices?**

Ms. Molina responded that at the moment the MIS systems of the various offices are not compatible. She stated that as part of her job, she is working with the Controller's Office to enable the sharing of financial information. She further noted that within the IRD/NRD division, a system of shared data already exists.

- **Are there any other points that you would like to mention?**

Ms. Molina stated the Windows and Banyan Vines versions of LAN are not compatible with each other,



and that we should be using the version of LAN which is Windows-compatible. She further added that as future plans to facilitate the flow of information with host-country agencies, her division is planning to acquire a modem. Asked whether she is in contact with the CSD, she responded that she is independent of them□

Date: February 22, 1994

Interviewee: Henry Reynolds

Title: Office Director

Division: Education & Training (OET)

● **Can you tell us, in short, what are the goals of your division?**

Mr. Reynolds stated that they are the same as the Strategic Objectives which have been established. In general, the goals of OET are to "improve the quality of education with equity in El Salvador". Mr. Reynolds added that some of the projects that OET is handling are not directly related to education and may have as their primary goal, economic growth or some of the other five strategic objectives of the Mission. He gave the examples of working with FUPADE (Fundación Empresarial para el Desarrollo Educativo) and also the CAPS program. He added that his division has gathered a large amount of research documents on the significance of education as a requirement for equitable economic growth.

● **What type of data or information is your division in need of?**

Mr. Reynolds responded that OET is attempting to increase the quality and efficiency of the education system. These are measured by finding out how many youngsters have gone through the six years of basic education, what the drop-out rates are, and the achievement rates of students in class.

● **Are most of the type of data that you mentioned gathered by your staff or are they contracted out?**

Mr. Reynolds stated that most of their data is from the Ministry of Education. When it comes to data related to the achievement tests, however, they are not being collected by the Ministry and AID is conducting its own tests. OET is attempting to lobby the Salvadoran government to institutionalize this testing process.

● **Are current information technology and information systems at your disposal supporting the activities and goals of your division?**

According to Mr. Reynolds, there exists a problem with data reliability of the data that the Ministry of Education gathers. That needs to be improved. With specific reference to the question, he stated that there is not a given system to monitor projects within the OET division and that most of the technology is used for the actual writing and printing of the reports.

● **What are your feelings about the idea of sharing of data?**

Mr. Reynolds stated that he believes in a "open management style" and that sharing of information is part of that. He gave the example of an OET study on the area of human resource development and how the data has been shared by various organizations including the Salvadoran Presidential candidates.

● **Last years AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* (or in our**

case *cross-divisional*) computer systems. What are the type of corporate data which to your opinion all USAID/El Salvador could use?

Mr. Reynolds said that to him it would be interesting to be able to compare data from other countries on the status of their education with those of El Salvador. He brought the example of a comparative study that was done with regards to government spending on education and that the countries with higher investments in education had better results.

● **What do you think the role of the CSD should be?**

Mr. Reynolds responded that their role should be in training, maintenance of equipment, and finding out what are the utilities for end-users of the information system.

● **Is there anything else that you would like to add regarding the issues that we talked about?**

Mr. Reynolds stated that it would be nice if there were a statistician on his staff but that that would not be possible -for financial reasons. In addition, at times such as when the *Action Plan* is being written, Mr. Reynolds said that a data analyst would be helpful□

Date: March 1, 1994

Interviewee: Rafael Retana

Title: Project Manager

Division: Education & Training (OET)

● **Could you tell us what your responsibilities are within the OET division?**

Mr. Retana answered that he is the Project Manager for two projects: RTAC-2 (*Regional Technical Aid Center*) and the *Drug Awareness and Abuse Prevention Program*. He added that his main responsibility is to verify that all that has been agreed upon between USAID and the grantees are achieved. One of the grantees that he is working with is FUNDASALVA (*La Fundacion Salvadoreña Anti-drogas*). Two processes are looked upon in the monitoring: *implementation* and *dispersement*. Questions to be asked by the manager are: is the money granted spent timely and according to the contract? Mr. Retana continued that the same process is true for the RTAC-2 program, a regional program begun in 1988. This program was originally for Central America. It is now extended to all of Latin America. It's aim is to be able to provide text-books to Salvadoran students and individuals under the project in an economically affordable manner.

● **What type of data or information do your projects deal with?**

Mr. Retana stated that the RTAC-2 deals with books which are to be distributed per semester. The text-books are bought from Mexico City. The data involves the number of books, the promotion and format of request, inventory, unit prices, purchases, etc. In order to keep track of the said information, Mr. Retana stated that a MIS has been established. The system is uniform for each of the participating countries. Ideally, each Country Office would have a modem to be able to communicate with each other and Mexico City. The specific types and numbers of textbooks purchased are based on the requests received from Salvadoran universities (currently numbering 40). Therefore, the RTAC-2 program primarily involves figures related to books, inventory of books, etc. The Drug Awareness Program primarily involves training for schools, marginal communities, and private businesses. Training is also broken down by gender.

- **Can you name three or four pieces of information which by their availability, your program would be a success? In other words, what do you consider as your division's *Critical Success Factors*?**

Mr. Retana stated that the success of OET depends on the success of the individual projects. Each project in turn has *program outputs*, outputs which at times because of their conceptuality are difficult to measure. Mr. Retana added that the two projects which he manages have indicators of their own: the RTAC-2 program's success is dependent on the number of text-books sold relative to the number purchased per semester. Another indicator is the level of satisfaction of students in terms of the quality of text-books and availability. Mr. Retana added that FUNDASALVA's indicators of program success lie in the number of individuals trained in the three different sectors. He further noted that a survey had been conducted in 1990 in relation to knowledge, attitudes, and practices of people between 15 and 54 years of age. This is known as the base-line data. The progress of the program would ultimately depend on a second survey four or five years after the first one in order to determine the level of drop or rise in drug use. Mr. Retana noted that project and division successes should be determined through the measurement of their respective indicators.

- **Do you think that the current information technology and system at your disposal are supporting your activities and goals?**

Mr. Retana said that he considers the technology to be adequate for the preparation of reports. He noted, however, that the same technology should be examined during the design phase of the project. He noted that each division has objectives and outputs reflecting those objectives. Outputs, in turn, have respective indicators which measure their degree of success. It is during the design phase of such indicators, which Mr. Retana states the type of information technology to be used should be determined. He added that in his opinion "there has not been [any] coordination for such an activity." Mr. Retana stated that there is little relation among the design, implementation, and type of technology used for a given project. Mr. Retana stated that "in the future, [project managers should] establish coordination among the design, objectives, outputs, indicators, and the adequate technology to measure and report the progress [of a given project]".

- **What are your feelings about the idea of sharing of data and information?**

Mr. Retana stated that as an engineer and a meteorologist, he has dealt with much technical data in the past. He has always been, as a professional, willing to share data and information with others. Mr. Retana added that in the area of drug awareness, for example, "one person can investigate [and do the research], but the results of the investigation should be shared with others ... in order to improve the general environment."

- **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* (or in our case *cross-divisional*) computer systems. In your opinion what are the types of data that could be used by all divisions at USAID/El Salvador? And how should we go about the process of data-sharing?**

Mr. Retana stated the project-specific information should be available for each division: information such as the name of the project, the amount of project funds, whether it is a grant or loan, in dollars or local currency, and the particular components of the project. Mr. Retana added that some of the technical information may seem superfluous to some, never-the-less they should be provided. He also added that now that the Mission's goals are separated into *Strategic Objectives*, *Outputs*, and *Indicators*, each objective's indicators and progress level could be inputted and calculated through the system. The Front Office will specially benefit from this type of a system design.

● **How often are you asked to share data and information with other divisions; and when this happens, in what form does the sharing take place?**

Mr. Retana stated that almost no one inquires about the FUNDASALVA program from him, and that they usually approach that agency directly. However, with regards to the RTAC-2 program, there are a lot of interest and inquiry on a daily basis. The MIS system of the RTAC-2 program has not yet been installed in Mr. Retana's computer, therefore, he only gives the inquirers general information. Mr. Retana stated that because of the nature of the two projects he is managing, one receives much more interest than the other.

● **Would you like to see any other programs added to the LAN?**

Mr. Retana replied that his main software interests besides Wordperfect are LOTUS and QUATRPRO.

● **What do you think the role of the CSD should be?**

He replied that their role should be primarily maintenance and technical assistance.

● **Are there anything else that you would like to add with regards to the issues that we talked about?**

"The only thing that I can say is this: there should be *coordination* of all the efforts the personnel of the CSD make to help individuals". Mr. Retana noted that there are times that the CSD is too busy to attend to an individual's needs. Therefore, they should attempt to coordinate their work "in order to provide the adequate maintenance and ... training, but at the same time to attend to emergencies without a delay" □

Date: February 24, 1994

Interviewee: Laura McGhee

Title: Office Director

Division: Contracts (CO)

● **Can you tell us, in short, what are the goals of your division?**

Ms. McGhee stated that her job, in short, is to "support the projects here by awarding all the direct contracts for everything the projects need". She added that this could involve a technical assistance contract for a five year period, for example, or it could involve the purchase of computer equipment for a given office. "The goals are to support them as well as I can."

● **Could you give us some examples of specific activities taken when working on those goals?**

"We receive requests from the technical offices, we issue solicitations, we get in bids ..., we award contracts; its a lengthy, involved process and I don't think you need it for the purposes of this kind of study!", [i.e. SITPLAF]. She went on to say that CO's automation needs are within "tracking of actions, for information gathering on the types of actions that [have been] processed, for tracking close-out activities when a contract ends, ... those are our information gathering needs."

● **Do you think the current information technology at your disposal are satisfying those needs?**

Ms. McGhee responded: "No, because I need an application to help me with the close-out process which was not available when I requested it. In fact Mario [the CSD Administrator] told me that I should put in a request that it be contracted or else his staff be increased to handle it". She went on

to say that she can not go in much technical details about this type of system, but that she needs "report-generation capability" and to be able to extract from a MIS system the type of information that AID/Washington or visitors request -often within a very short notice. Such information are, for example, the number of contracts awarded in a given year, the total dollar value of those contracts, number of contracts which were *competitive*, number which were *non-competitive*, etc. Ms. McGhee stated that these are the types of information that she would like to have ready-access to.

● **Hence, you require a type of program or system which would help you manage that type of information?**

Ms. McGhee stated that the Agency currently has a program called CIMS (*Contract Information Management System*). She added that the CIMS is on-line with the VS-wang system and often times does not function properly and does not provide information in the form which the CO Office is in need of. Ms. McGhee went on to say that CIMS does not work on the LAN and that there has been a committee formed in Washington to look at a replacement for CIMS.

● **Last years AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* (or in our case *cross-divisional*) computer systems. What are your ideas on the development of corporate data within USAID/El Salvador? And what type of information do you think are of need to all office?**

Ms. McGhee said this question requires some thinking, but that the concept of sharing of information could relate to the sending of memorandums and public notices through the computer network. She added, however, that she has her preference for hard-copy of documents and notices. She prefers, for example, the use of MOMS on hard-copy.

● **What type of information does your office need from other divisions?**

She stated that, for example, recently she had been in need of knowing the number of vehicles which every division has; she would like to see, therefore, access to "inventories" through the system.

● **Do you think that documents such as the *Semi-Annual Reports* or the *Annual Budget Submission* should be made readily available to the staff?**

Ms. McGhee responded that she has never referred to the Budget Submission report in her work. When it comes to other documents such as the SARs, having them on the system during distribution time, in her opinion, may be helpful; she added that ultimately people may want to have a hard-copy to by their side during the actual review sessions.

● **Besides an equivalent system to the CIMS which would be LAN-compatible, what other information technology would you like to have access to?**

Ms. McGhee mentioned the "*application* that [she] needs for contract close-out". She stated that CO has bought a program recommended by AID/Washington but that it is cumbersome and is not fulfilling her office's needs. She would like a person familiar with the program to advise CO on it.

● **What do you think the role of the CSD should be with regards to the topics that we discussed?**

"Be there when I need you!" Ms. McGhee continued that indeed the CSD staff has been very responsive in helping her out with system problems

Date: March 3, 1994

Interviewee: Rosa Blanca

Title: Contracts Supervisor

Division: Contracts (CO)

● **Can you tell us what your responsibilities are within the CO Office?**

Ms. Blanca stated that her office helps the technical offices in *project procurement*, of both *contractors* -long and short term- and *commodities*. She added that CO also provides technical advise to host-government agencies, such as the SRN (*Seretaria de la Reconstruccion Nacional*). Ms. Blanca noted that her specific responsibilities are to review documents related to contracts and to flag and solve potential errors or problems before the contracting officer signs the document (the contracting officers for USAID/EI salvador at the moment are Ms. Laura McGhee and Ms. Paula Miller).

● **Can you give us a specific activity that you undertake as part of your responsibilities?**

Ms. Blanca responded that she supervises two *junior administrators* and three *contracts specialists* who are given tasks related to the various features of project contracts. The information generated are imputed in the CIMS program (*Contracts Information Management Systems*). She said that she is also responsible for negotiation and administration of some contracts. In addition, Ms. Blanca attends Project Implementation Committee meetings (PIC), at times substituting for the Project Manager.

● **What types of specific data or information does your office work with?**

Ms. Blanca stated that since 1991, Contracts Office has been using the CIMS system for imputing projects' data. The type of output data which CIMS is able to generate are related to contracts, modifications, grants, and agreements: information such as the number of contracts awarded during a certain period of time or the number of contracts awarded to small businesses, etc. Ms. Blanca added, however, that the recent *Inspector General* visit has required the generation of certain reports which CO has not been able to extract from the CIMS. The number of contracts closed during a given period is a good example of what the CIMS was not able to generate. Ms. Blanca added that once a month, the updated data of CIMS are sent to AID/Washington as a computer tape through the CSD. She noted that CIMS is not compatible with the new LAN system, therefore, the Contracts Office is currently using two systems, one being the Wang network in order to access CIMS, the other being the LAN for other purposes. Ms. Blanca stated that the other type of information that her office deals with are related to detailed budgets of projects. Budget calculations have been done manually in the CO office and it is only recently which the staff is beginning to use the LOTUS program. Ms. Blanca stated that because of time constraints, the staff at CO have not been able to get much detailed instruction in LOTUS.

● **If there were three or four activities which your division should be doing correctly in order to be successful, what would you say they are? In other words, what are your divisions *Critical Success Factors*?**

Ms. Blanca replied that: 1) if her office would be proficient in LOTUS and perhaps QUATROPRO, it would facilitate their jobs and create efficiency. 2) There also exists a program called *Automated Contract Close-out System* (ACS). Currently none of the managers are able to properly program this system. Ms. Blanca stated that knowledge to use the ACS by her office and by the government agencies which her office assists, would be the second needed objective. 3) According to Ms. Blanca, although the computer training sessions are very good, because of lack of time and the complexity and variety of the new softwares, her staff would do well by getting individualized instruction in the explanation

of the various computer features.

● **Do you think that a training session for your department alone would be useful?**

Ms. Blanca agreed and noted that each Division has specific needs, therefore a creative training method tailored to office or individual needs would be very helpful.

● **What are your feelings about the idea of sharing of data and information?**

Ms. Blanca stated that she likes the idea very much, and that as a supervisor, she is quite often asked to provide a variety of information which her staff are working on. She would like to be able to access the system and extract information that were imputed by others. She noted, however, that certain information, such as contracts information as in who is competing with whom and who has bid how much, can not be released or shared up until a certain point in time.

● **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* (or in our case *cross-divisional*) computer systems. What are your ideas on the development of corporate data within USAID/El Salvador?**

Ms. Blanca stated her thoughts as of the type of data that she would like other divisions to share with the Contracts Office: her office would benefit from being able to extract or use the Controller's Office data on project finances on a *read-only* basis. This method of corporate data utilization would be useful for the CO specially at times of contract close-outs.

● **Does the Contracts Office have access to the MACS system of the Controller's Office?**

Ms. Blanca replied that CO does not have access to the MACS, but it certainly wouldn't mind having access to it for certain read-only features similar to what she had stated above. Ms. Blanca added that such an ability would also save time for the CONT Office, since they would not have to produce a financial report for CO when CO can read the information directly off the system.

● **In your opinion, what are some of the information that everyone in USAID/El Salvador can use?**

Ms. Blanca responded by saying that information related to specific projects, such as project numbers, the entities involved, and other information such as the MOMs -which are already on the system- are what everyone should have access to. She added that some information from her office are considered as *public*, but can only be accessed through the *Freedom of Information Act*.

● **Would you like to have access through your PC to such documents as the *Action Plan*, the SAR, or the *Annual Budget Submission*?**

Ms. Blanca responded affirmatively and noted that the most important information that her office would want access to are information on the individual projects. Currently in order to access such data, she has to contact the *back-stop* officers for the projects within PRJ. She added that a system which would allow documents to be cleared by the various individuals throughout the Mission on a list would be helpful -however she noted that this could create more paper, since people do not like to stare at their terminal-screen for too long. However, she added that the cables which are relatively short could be sent through the computer system.

● **What do you think the role of the CSD should be?**

Ms. Blanca stated that among other things they should help out in *applications development*. Specifically she stated that her office could use a computer consultant's help in the designing of the Automated Contract Close-out System (described above) to fit the needs of her division

Date: February 28, 1994

Interviewee: Michael Deal

Title: Office Director

Division: Projects (PRJ)

● **Can you tell us, in short, what are the goals of your division?**

Mr. Deal stated that the Projects Office is in charge of design and development of new projects plus providing implementation support to technical offices. The process begins with the Action Plan document. Projects Office aids in the processes of writing of *project identification documents* and *project papers*. It negotiates agreements with USAID/El Salvador counterparts. It also aids technical offices in commencing the projects, and manages the Semi-Annual Review sessions and oversees the creation of the SAR document.

● **Will the upcoming reorganization of USAID/El Salvador affect the goals of your Office?**

Mr. Deal responded that the Projects Office will be merged with DPP by the beginnings of the next fiscal year. This merging of the two Offices will create a more integrated process of project design and implementation. He added that other changes will be the increase in support for the *strategic objective teams*.

● **Can you give us an example of how a given activity of your division is carried out?**

Mr. Deal elaborated on the process of *project design*. His office chairs *project design committees* with representatives from ECON, DPP, CONT, and CO Offices. The committee next drafts a new activity description for the Action Plan with outside consultants helping in the process. PRJ's role is to ensure that USAID's project design guidelines are followed. In summary, in order to see the culmination of the project design phase, PRJ chairs the design committee, does much of the drafting, oversees the work of outside consultants, and coordinates the roles of the various offices involved.

● **In general, what type of data and information do your activities involve?**

Mr. Deal stated that with the aid of the CONT Office, a detailed (five to six year) budget would be designed. PRJ also works with the ECON office to aid in the *recurring cost analysis* to look at abilities of counterpart and government contributions. In terms of computer requirements, Mr. Deal added that much of the work is done through outside consultants in conjunction with technical offices. PRJ itself mostly uses LOTUS as the spreadsheet program and mostly utilizes word-processing to create the final project report document.

● **In your opinion, are current information technology and systems at your division's disposal supporting your goals and activities?**

Mr. Deal mentioned that the LAN system is going to facilitate the task of information sharing among the various offices. He further added that he feels satisfied with the availability of LOTUS, Wordperfect, and the use of Harvard Graphics through the LAN.

● **What, in your opinion, are three or four activities that would determine your division's success, in other words, what are your division's CRITICAL SUCCESS FACTORS?**

Mr. Deal stated that if PRJ can put a project together that meets USAID/Washington's requirements, the Mission's requirements, and gives a sense of ownership to the counterparts, PRJ would consider its role to have been successful.

● **You have already touched on the idea of sharing of data, can you elaborate for us what your feelings are on this concept?**

Mr. Deal responded that in terms of Portfolio Management, PRJ would like to see the type of system that USAID/Washington has been utilizing. They are using either FOX-PRO or ORACLE for what they roughly call *portfolio management database*. This will allow USAID/El Salvador to combine planning, budgeting, and project-specific data and to use them simultaneously when putting together the *Semi-Annual Report*, the *Congressional Presentation*, or the *Action Plan*. This way, Mr. Deal added, the various offices involved such as CONT, DPP, and others will not have their separate database pertaining to the same data. Currently they do have separately designed databases. The combined effort has to take into consideration how user-friendly and labor intensive will the shared system be.

● **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing corporate data that everyone could use, and 2. Building cross-organizational (or in our case cross-divisional) computer systems. What are your ideas on the development of corporate data within USAID/El Salvador?**

As he had mentioned above, Mr. Deal thinks that the portfolio management database system should be made available to the Mission. Currently, the MACS system of CONT only produces accounting type reports which are not compatible with every other offices' systems. Mr. Deal also added that the new AWACS¹⁸ system should also fit into the mentioned portfolio database system.

● **What do you think the CSD's role should be?**

Mr. Deal stated that CSD's manager and staff should become fully familiarized with the new FOX-PRO system so that every office will be able to tap into the same database, and for the system to be able to generate tailored reports for the individual offices and USAID/Washington's needs. Mr. Deal further pointed out that the FOX-PRO software is LAN based and has originally been supplied only to the PRJ and DPP offices. CSD's assistance to these offices in laying out the system would be appreciated.

● **With regards to the various topics that we touched upon, do you have anything else to add?**

Mr. Deal stated that the training sessions should be tailored to the needs and time requirements of the offices. He also mentioned that intermediate and advanced training in LOTUS has been requested but not received. He further noted that training in Wordperfect and Harvard Graphics and training in the ability to merge the two systems in one document is important. Mr. Deal also mentioned that some staff have complained that the CSD staff are not patient enough with them. He noted that additional instructors such as the current Wordperfect instructor, Mr. Fred Navarrette, recruited from professionals in town, in order to teach the above mentioned courses would be appreciated □

¹⁸ AWACS stands for USAID/Washington Accounting Control System. It is a "business system development project" as part of the ISP (USAID/Washington 1993-d).

Date: March 2, 1994

Interviewee: Michael Radmann

Titles: Project Development Officer / Project Manager

Division: Projects (PRJ)

● **Please tell us what your responsibilities are in general.**

Mr. Radmann stated that he is an IDI (International Development Intern¹⁹). Part of his role as an IDI is to become familiar with the functions of the Mission. He added that he is fortunate to be in a Mission which is involved with almost all types of activity which USAID as a whole works with. His principal role and responsibilities are within the PRJ Office and the designing of new projects and amendments to current projects and agreements, hence the term *Project Development Officer*. Along with that role, he said he also has a "macro or strategic" duty of being the "back-stop officer" for various projects related to ODI and IRD. Within IRD, he has been the back-stop officer for the following projects: *Save the Children*, *Special Development Activities*, and *Public Services Improvement*. He further added that he is the Project Manager for the *Technical Support, Policy Analysis and Training Project*.

● **Can you tell us the specific activities that you do in order to carry out one of your stated responsibilities? Putting it another way, you mentioned that you are a *Project Development Officer*. What does that entail?**

Mr. Radmann stated that as a Project Development Officer, 1) he is the first stop for creating a project through a *project paper* -the design and framework mechanism for a new project which later is approved by the Mission and negotiated with either the host country (Handbook N^o 3 agreement) or an NGO or contractor (Handbook N^o 13 agreement). After the project is approved and agreements signed, the various technical offices are in charge of managing the project. 2) The other role of a Project Development Officer is to monitor projects overall; that is where the SAR process comes into the picture. The PRJ Office has been in charge of putting the SAR documents and their meetings together. In other words, PRJ in this role has been "a liaison between the Front Office and the Project Managers".

● **Within this scope of activity, what type of information and data do you deal with?**

Mr. Radmann responded that he deals with an abundance of information. That being the case because the PRJ office acts "as a warehouse for all the documentation" from *Project Agreements* to *Project Papers*, *Amendments*, *PILs (Project Implementation Letters)*, etc.

● **Are current information technology and system at your disposal supporting your goals and activities?**

Mr. Radmann stated that there are several items which come to his mind in terms of need. One being "scanners". He went on to say that with the volume of documents which PRJ has to store, the availability of a scanner would be very helpful. He asked: "*Why don't we have access to the existing scanner and know where it is!*?". He further added that for all of the PRJ division, there is only one laser printer and that there is need for more. Mr. Radmann also stated the need to have access to a CD-ROM reader specially now that the 33 USAID handbooks will be made available on a CD-ROM

¹⁹ An individual who has been hired by USAID as a career employee and is on his/her first year of employment is known as an IDI.

diskette.

● **What are the few critical information that you need in order to succeed in your activities? In other words, what are your division's *Critical Success Factors*?**

Mr. Radmann stated that one would be the financial information which are housed in the Controller's Office. He stated that many a times the project managers and the Controller's differ in terms of reporting. The generation of documents is also critical: documents such as the SAR, the project papers, and documents leading up to the project paper. Those documents leading to the project paper are the *new activities* document and the *project identification* document (the conceptual framework of the project). In summary he stated that the few critical information are financial data, information from the Project Managers, and the type of information generated from the Semi-Annual Reviews. He added that access and use of handbooks are also of critical importance for his division's success.

● **What are your general ideas about the concept of sharing of data?**

Mr. Radmann responded that the various technical offices may not have any idea as to the functions and activities of each other's divisions. Mr. Radmann went on to say that the Strategic Objective approach and Teams have been very constructive, since it is forcing the various offices to actually meet and talk to each other -something that they may only do during the semi-Annual Reviews and the Strategic Objective team meetings.

● **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* (or in our case *cross-divisional*) computer systems. How do you think USAID/El Salvador can go about the development of corporate or shared data?**

"I can't have [ready] access to any of the documents in other divisions. I'd like to know why?!" Another point that Mr. Radmann wanted to point out was before the era of the LAN it was pretty difficult to access one's own account through another terminal, which it no longer seems to be the case. He further stated that the availability of the MOMS on the system has been very helpful. He further inquired about the availability of handbooks through the system.

● **In your opinion, what are the type of information which all USAID/El Salvador is need of? And what type of data and information should be readily available to your division?**

Mr. Radmann responded that all Offices should have access to the summary of all projects. He added that there are general documents such as the SARs, ACTION Plan, Budget Submission, and the Briefing Book which are of good general usage and could be made available to all. Mr. Radmann continued by saying that besides such USAID documents, there are Salvadoran documents such as the country's Constitution which can be of general use to all offices.

● **When it comes to information technology, what else comes to your mind in terms of needs?**

Mr. Radmann said that he had already mentioned the hardware needs for printer, scanners, and CD-ROMS. In terms of software, he pointed out that a Spanish dictionary is being acquired and will be of good help.

● **What do you think the role of the CSD should be when it comes to the issues that we talked about?**

Mr. Radmann pointed out that the CSD has been very helpful in terms of technical assistance -both with software and hardware- and with regards to training. In his opinion, those are the two activities which they should continue to concentrate on

Date: February 28, 1994

Interviewee: Ana C. Mejia

Title: Project Development Specialist

Division: Projects (PRJ)

● **Can you tell us what your duties are within the PRJ Office?**

Ms. Mejia stated that as *Project Development Specialist*, she advises the technical offices on preparation and implementation of projects which USAID/El Salvador operates in conjunction with the Salvadoran Government and PVOs. She back-stops projects pertaining to the HPN and some of IRD/NRD. She also deals with general USAID regulations which are outlined in the Mission Operation Manuals (MOMS); she provides information about MOMS to anyone in need of them in the Mission.

● **Can you give us an example of specific activities you require for carrying out your responsibilities?**

She stated that she has to attend meetings on projects. She, along with others, is currently preparing amendments for various projects. In addition, she prepares agreement documentations with the government and the PVOs.

● **What type of data or information does your office deal with?**

There are various financial documentation and post-Action Plan follow-up activities charting, which are done within her office using Wordperfect and Lotus.

● **Are current information technology at your disposal supporting your activities and goals?**

"Yes".

● **Can you name three or four activities that if done properly, then your goals would be met?**

In other words, what are your *Critical Success Factors*?

Ms. Mejia responded that those activities would be: 1) timely documentation for the obligation of funds, 2) project follow-ups after the SAR presentation, 3) successful record-keeping of changes of activities, and 4) quarterly updating of project financial information.

● **What do you think about the concept of sharing of data?**

Ms. Mejia stated that her division is in need of information from various departments of USAID/El Salvador. These information are usually transferred through diskettes (an individual walking to another office to copy the data) or through hard-copies (for example, the financial update of a given project put out by the Controller's Office MACS program). Ms. Mejia mentioned that data-sharing through electronic means would be much more appropriate.

● **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* (or in our case *cross-divisional*) computer systems. Do you have any more ideas regarding the concept of corporate data?**

Ms. Mejia responded that proper sharing of information with AID/Washington is also important. She stated that various offices in AID/Washington throughout the year may ask for the same information but in different formats. According to Ms. Mejia, there is a need for coordination of the format and sharing of data among the various Offices here and in Washington.

● **In your opinion what are the type of data which should be shared in common by all and be able to be accessed through the computer network here at USAID/El Salvador?**

Ms. Mejia stated those should be general financial and program information. In addition, Ms. Mejia stated that the technical offices can provide up-to-date information on their projects which could be shared with others.

● **What do you think the role of the CSD should be?**

According to Ms. Mejia, the CSD should provide technical assistance and advise the offices on the best method-of-use.

● **Do you have any more comments?**

Ms. Mejia stated that training by the CSD has been excellent and they should continue with similar training courses with new computer packages

Date: February 24, 1994

Interviewee: Carol Steele

Title: Office Director

Division: Development Planning & Programming (DPP)

and Interviewee: Jacklyne Greene

Title: Program Advisor (PSC)

Division: Development Planning & Programming (DPP)

● **What are in short the goals of your division?**

Ms. Steele stated that the goals of her division are the forward planning for USAID/El Salvador including the "full budgeting cycle" except the O/E of the Mission. Ms. Steele noted that DPP will soon be merged with PRJ.

● **Could you tell us some the activities involved with the goals of your division?**

Ms. Steele responded that among the activities of DPP are the creation of the *Action Plan* which looks at the programs of the Mission for the following two years, the "full range of budgeting documents" such as the *Congressional Presentation*, *Annual Budget Submission*, and all the briefing papers. DPP is also "responsible for program outreach which involves other donors, the PVOs and NGOs, as well as the public at large" in terms of any type of data exchange and public relations. DPP is also responsible for the local currency program: "dollars are used to buy imports from the United States, and the local currency generated by those imports are used for development activities". That has been about \$75 million a year "that in many ways parallels the development assistance program of the rest of the Mission."

● **What types of specific data and information does your division deal with?**

Ms. Steele stated that DPP deals with program numbers, managers, project assistance completion date, the amount of money an activity requires, etc. She stated that PRJ also tracks some of the same data, therefore, making the merging of the two divisions logical. DPP tracks the indicators of program

progress. That is one reason Ms. Greene was hired to help DPP measure those indicators.

Ms. Greene stated that her job is to see what the indicators for all of the Strategic Objectives are and how they are to be measured. A system is to be developed that all parties involved such as the Project Managers, the technical offices, the Mission director, and USAID/Washington would be able to use. Ms. Greene stated that these measurements will look at the real development impact rather than on simply the commodities which were delivered.

Ms. Steele added that her office needs to be in close contact with the Controller's Office in order to verify the financial information. She added that Washington has produced the *Automated Budget Planning and Management System* which is to link all USAID worldwide project data together.

● **If DPP and PRJ were to measure three or four activities in order to measure their success, what would you say they would be?**

Ms. Steele stated that they would be: "the measurement of progress in the Agency, the forward planning ..., program implementation monitoring and planning for new projects ..., and the outreach".

● **What are your feelings about the idea of sharing of data?**

Ms. Greene stated that there are really two types of data, the *financial* and the *program progress* data. When it comes to data related to program impact and indicators, they should be shared as widely as possible not just throughout USAID/El Salvador offices, but with host-country government and counterparts, in addition to Washington.

Ms. Steele stated that as far as she is concerned the financial data should be available for all on a read-only basis. Ms. Steele stated that there seems to be a need for a directory on the LAN for the purpose of sharing and co-editing of data. Currently she mentioned, that this type of activity is only possible by the physical exchange of discs. Hence, a joint account which for example both ECON and DPP could use would be useful.

● **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* (or in our case *cross-divisional*) computer systems. What do you think is the base-data which all USAID/El Salvador should have access to?**

Ms. Steele stated that the information on the Automated Planning and Management System on such project information as required for the SAR such as financial information, status, and meeting of objectives should be on the system and public. She emphasized that "the distinction is on changes", that is who is allowed to make changes on the posted data.

Ms. Greene stated that the type of information are "text type", numbers, and graphs. She noted that a program such as MAGELLAN, which is inexpensive, can provide the interface among the different types of data.

● **What do you think the role of the CSD should be with regards to the points we talked about?**

Ms. Steele said that CSD's function is "vital to set up these functions" (that were discussed). She mentioned that in most offices there is only one person who deals with systems' questions. She noted that although it is a good idea for each office to have a specialist for "applications development", CSD's role should also be to link all of the offices' systems together.

Ms. Greene pointed out that another role for the CSD besides training, applications development, user

support, etc. . That is, methodology of computer use, so that not every office is developing its own system independent and different from others.

● **Do you have any other comments regarding the issues we talked about: information technology, computers, and shared data?**

Ms. Greene pointed out that she is planning to detect what type of programs the DPP staff are using, in order to make the new system compatible to their ability -user-freindly. She pointed out that she would be seeking the advice of CSD on that issue.

Ms. Steele mentioned that with regards to the E-mail system, it would be useful if there were a "hot-key" which would allow one to exit momentarily from the program one is working on, respond to a received message, and continue with ones work again□

Date: March 1, 1994

Interviewee: José Funes

Title: Program Development Specialist

Division: Development Planning & Programming (DPP)

● **Can you tell us, in short, what are your responsibilities within the DPP division?**

Mr. Funes stated that his office, the Local Currency Unit, deals with the generation of local currency, currently amounting to about 400 million colones. He mentioned that for this goal, his office deals with the Salvadoran institution SETEFE (*Secretaría Técnica de Finaciamento Externo*), who are his office's principal counterpart. Mr. Funes mentioned that some of USAID/El Salvador's development projects are partially funded by local currency which SETEFE has approved through his office's negotiations. He stated that most probably by next year there will not be any more local currency programs available for USAID/El Salvador projects.

● **It seems like you are involved with a lot of economic analysis. Does your office, therefore, deal much with the ECON division?**

"Mas o menos." He mentioned that his unit does a lot of financial and planning analysis and since 1983, has had access to a MIS system which aids in his division's analysis.

● **What other types of data and information does your division deal with?**

Mr. Funes stated that on a quarterly basis, information are updated with coordination with SETEFE: information such as the number of properties registered, etc. These updates are shared with USAID/El Salvador's technical offices. There are also financial information such as dispersement, etc.

● **Are the information that you receive from SETEFE on disc or hard-copy?**

"Hard-copy".

● **In your opinion, are current information technology and systems supporting your activities and goals?**

"They are useful to us."

● **What do you think of the idea of sharing of information?**

...nt idea, one that his unit practices regularly. He states that all of his dealings with SETEFE are shared with the technical offices of USAID/El Salvador.

● **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* (or in our case *cross-divisional*) computer systems. What are your ideas on these topics and what do you think are the type of information that all of USAID/El Salvador could use?**

Mr. Funes stated that since his unit is involved with financial analysis, that is the information that he could share with others.

● **Do you think that documents such as the *semi-Annual Reviews* or the *Budget Submissions* or the *Action Plans* should be readily available through the system?**

Mr. Funes mentioned that that is a good idea; however, he continued that his unit produces reports such as the *Letter of liquidation*, *Report on the PVOS*, or the *Desembolsos Mensuales*, and that not all of the information in those reports are useful to all USAID/El Salvador Offices.

● **You mentioned that you exchange information with your principal counterpart, SETEFE, in hard-copy. Are there any plans to regulate the type of systems that they and your office use in order to facilitate this exchange?**

Mr. Funes stated that perhaps in the long-run that may be the case. He added that *Ministerio de Hacienda* is going to absorb SETEFE.

● **What do you think the role of the CSD should be?**

Mr. Funes stated that so far he has been satisfied with the facilities. He stated that he mainly uses wordperfect and LOTUS, and that strengthening the training program would be good.

● **Do you have any other points to add regarding the issues we discussed?**

Mr. Funes said that to him the idea of information sharing is "excellent" and will provide the Agency with better decision-making capabilities. He also mentioned that the local currency analysis program software is VS-based and there may be a need to find a LAN-based program

Date: February 28, 1994

Interviewee: Juan Belt

Title: Office Director

Division: Economics (ECON)

● **Can you tell us, in short, what your division is all about?**

Mr. Belt stated that his division's staff are composed of economists. ECON's role are threefold: 1) the ESF (Economic Support Funds) program which grants funds to the Salvadoran Government based on policy changes. As one example, Mr. Belt stated that last year ESFs totaled \$80 million and as one condition, tax offences legally became criminal. Improvement of the economic data of the country through support for the gathering of basic data such as those of households and the census, analysis of national accounts, etc., also fall into this category. This role is critical since the economic database of El Salvador are used by not just USAID/El Salvador, but the World Bank, IMF and others. 2) ECON Office also has small projects and seminars. One recent seminar was called *Modernization of the State*

which drew close to 260 attendants with world renown economists as guests. This allows the Salvadorans to be acquainted with top world experts and provides them on-the-job training; this is a tremendous learning experience for the counterparts; 3) the third activity is supporting Mission work within the project design team and providing economic analysis. Another activity of the ECON Office is the writing of monthly report on Salvadoran economic indicators such as prices, imports, exports, volume of activity, etc.

● **What type of data and information does your office deal with and are current information technology at your disposal supporting your goals and activities?**

Mr. Belt explained that his division deals with a vast amount of data, including fiscal and monetary side. Mr. Manuel Rosales deals with the bulk of the data. LOTUS is used for storing these data and Harvard Graphics is used to present them visually. The data is composed of national accounts, GDP by sector, growth rates, data on prices, composition of public expenditures such as health and education, interest on the debt, monetary data, balance of payments, etc. Mr. Belt stated that the ECON Office has very close contacts with the Central Bank which provides them with the majority of these data. The data are essentially in hardcopy and then are imputed into LOTUS files. Mr. Belt added that the individual handling monetary figures in the ECON office has gave the government the format of the LOTUS file which she uses and ever since has been receiving data directly on LOTUS.

● **If you were to point three activities that your division does in order to gauge its success, what would you say they are? In other words, what are your division's *Critical Success Factors*?**

Mr. Belt responded that it depends on the *policy matrix* that has been developed. If, for example, certain policies are met by government, and economic goals are met. He brought the case that, for example, a certain tax was imposed that increased the Salvadoran GDP by 1%. This included computer assistance which contractors provided to the taxation office in El Salvador. Hence, ECON Office determines that this new tax policy was successful. Mr. Belt stated that with the other responsibilities of ECON, there are other ways to measure success.

● **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* (or in our case *cross-divisional*) computer systems. What do you think is the base-data which all USAID/El Salvador should be using? And how do you think we should go about the idea of shared data?**
Mr. Belt stated that the ECON division has created the indicators to measure the Strategic Objective #2: *Broad-based Economic Growth*. ECON also is behind the gathering of the household data which many consultants are in need of. Much of that is in the ex-conflictive areas; these surveys will be repeated in a couple of years in order to measure the degree of progress.

● **How do you think we should go about the actual sharing of data?**

Mr. Belt stated that currently sharing has been purely in hardcopy. He also mentioned that divisions are currently interested in reports generated by ECON, not pure data.

● **Do you think therefore it would be a good idea for those reports to be on the system?**

Mr. Belt answered that ECON's monthly reports could be on the system. The indicators of the Action Plan could also be on the system in which case DPP would have an easier time retrieving them. He added that each of the Strategic Objectives have a team and indicators for the objective. The monthly updated report of these Strategic Objectives and their indicators could be on the system.

● **What do you think the function of the CSD should be with regards to corporate or shared data and with information technology in general?**



Mr. Belt stated that his division uses the CSD staff as consultants at times when the software manuals are confusing. He noted that the services the CSD has provided have been excellent. He added, however, that ECON has interest in some packages that other divisions are not, such as TSP (a time series program) or Forecast-Pro which are currently being used by his division. Another software is JAVELIN which could be the next step above LOTUS and could be a better way to handle the Strategic Objective Teams' database□

Date: February 21, 1994

Interviewee: Mark Galiagher

Title: Economic Advisor

Division: Economics (ECON)

● **What is your position in the Economics Division?**

"I am an economics advisor. I give advice to the Ministry of Finance, or the Government in general, on first and foremost, taxation, government spending, and government structure."

● **In your opinion, what are the goals of USAID in general?**

"I guess USAID's goals in general in the Third World are to maintain a U.S. presence in the area of providing assistance and economic development; and that that is essentially subject to the overall goals of foreign policy -at least that's what they told me when I was a trainee- and to contain the Soviet threat, but that's no longer the situation! ..."

● **Would you say that these are the same goals for the Mission here?**

"No. I think the goals of the Mission here in a formal sense are to help the Salvadoran economy grow and achieve a sustainable basis for peace and prosperity in the future."

● **And what about the goals of the Economics Division?**

"Our goals are to work specifically in ensuring the economic content of the Mission's projects and programs and often to promote good macro-economic/micro-economic policies and improve government structures and regulatory framework."

● **Within USAID/El Salvador or the Economics Division, would you like to see any additional goals? Or should the goals be any different relative to what they are at the moment?**

"I haven't given it any thought. ... Maybe we should serve the Mission more."

● **Do you mean as far as the economics of the projects are concerned?**

"Yes. I don't see that we are all that involved in what the rest of the Mission does. Perhaps we should be more involved in the economic contents of projects. ..."

● **What are the specific goals of your area of responsibility within the Economics Division?**

"Tax and administrative reform -which are mainly achieved-, improving government spending, and improving the structure of the government: *decentralizing*."

● **Are there given projects that you are to be involved with, or are you an advisor to all the projects?**



"Yes and yes. Foremost, I am the manager of the *Modernization of Salvadoran Tax Project*. I am heading a study on tax-systems and its improvements to date and where it ought to be going to. I was one of the original designers of the modernization of the State activities. I'm doing a document with FUSADES on fiscal federalism. I also advise HPN and OET and a little bit IRD on government spending issues and decentralization issues. I participated in the education sector assessment, for instance."

● **In short, what are the activities taken to carry out your goals? And what types of data or information does your office deal with or is in need of in order to carry out your goals?**

"Data is a real problem. I need government spending data, I need government revenue data. Basically my data problems are the same data problems that the central government has. There, they have numerous extra budgetary accounts, which make it difficult for me to really find out how big is the government. We don't know how many public employees there are, for instance. ... There are all sorts of data requirements that I have. And I don't have the time to go digging them up, I have too much work to do. Yet my work requires good data. Hence I have to subsist on lower quality data. I maintain my own databases. I don't have anyone collecting data for me, except for some macro economic data. We have a research assistant here who pulls that together. ... Aside from that, what's a big problem? I have no access to journals. I have no access to World Bank documents, to IMF documents. It's very limited to get stuff from Washington. Washington is very helpful in this. But just being out here in the field means that you are without [the] sort of stuff that an economist would like to have in order to do descent research."

● **The way I understand it, a major problem is a personnel problem. You would like to see individuals collecting these data. Am I correct?**

"Yes, I would like that. Since it financially costs AID a lot for *me* to do it, considering what it costs to have me here."

● **Are current information technology and information systems at your disposal supporting the goals of your division?**

"No. No. We should be able to download through my own PC, abstracts, documents, journal articles, and have instant access to them. We should be able to download international databases. We do not have that at all. That's what I would like to have. When I was at the World Bank, we used to have daily reports on commodity prices, interest rates, stock markets, things like that. That may not be quite what we need here, but we are so out of touch here. We're still relying on things like *Current Economics and Finance Bulletin*. So what I do is I find a couple of articles that I think might be interesting. All I have are the titles and the journals. I don't have an abstract of the articles. I then have to sent for them to CDIE asking them to get me a copy of the articles. ... For instance, here's a paper in the *Journal of Development Economics* on Audit Selection and Income Tax Under-Reporting in the Tax Compliance Game. Well, this is what I do for a living, but to get this article [here] is going to be much more difficult than if I were in Washington."

● **What are a few critical information which your division needs in order to succeed in its goals? In other words, what are your division's *Critical Success Factors*? What three or four factors should be emphasized?**

"National accounts. Government finance statistics. International trade statistics. These are all areas rather than individual indicators. And one problem which has been a draw-back to this division ... is the low quality of demographic data and household expenditure and income data. These surveys exit but they are not good."

● **What do you think are some of the Critical Success Factors for USAID/El Salvador?**



"We have the Strategic Objectives and the indicators that go with that. For example, better educated and healthier Salvadorans -you can measure that; sustainable economic growth -I don't know what *sustainable* really implies! It implies different things to different people, so we have to be specific in that. Avoidance of environmental degradation is another one of our objectives; I presume there are a slew of indicators for that."

● **Last year's AID/washington's ISP (Information Systems Plan) had the two goals of: 1. Establishing *corporate (or shared) data* that everyone could use, and 2. Building *cross-organizational* computer systems; ...**

"... When I was at the World Bank, we had a couple of different systems [of corporate data]. We had an MIS which they used for time and attendance and locating of contractors by technical areas, nationality, and what-have-you. That seems like a good idea, but people didn't use it all that much. Contractors under those conditions are hired by reputation and who people tell you are good. But what we did have, which I felt was absolutely excellent was what is called the BESD (Bank Economic Social Database) which is now partially available by diskettes through a system called STARS (*Statistics Time-Series Accounts Retrieval System*). ..."

● **Are you aware that much AID information are now on CD-ROM and that we have access to them?**

"Yes, but it doesn't give me economic data. ... The times that I've used CD-ROM have been through CDIE in Washington. They've been very responsive. They've done searches, downloaded materials for me. I do know that we have that available here, but the two to three times that people were going to show it to me, the system didn't work. But that is more than a year ago.

● **What are your feelings about the idea of sharing of data and information? What type of data are you willing to share with others and what type of data are you not willing to share with others?**

"I'm very open. Probably more open than most people ... Certainly more open than my Salvadoran counterparts. What am I not willing to share? Haven't ever turned anyone down!"

● **How do you think USAID/El Salvador can go about the development of *corporate/shared* data? Do you think we should be buying some of these databases, or should we have direct access to them?**

"I would like to see direct access. I don't, however, know what it costs and who else is interested in them. For my own purposes, I would love to have direct access to abstract databases, CDIE databases ... I would love us to be on INTERNET, and also to have access to COMPUSERV, but maybe this is a pie in the sky!

● **What are the most important data and information which should be readily available to all AID staff?**

"I don't know if all the staff are interested in the same things. I know that I am interested in very different things than most of my colleagues here.

● **In terms of information technology, what do you think are the needs of USAID/El Salvador?**

"All I need is my printer ..."

● **You would like to have one in your office?**

"I probably write a 1000 pages a year. I also do a lot of graphics. I also integrate graphics with word-

processing and statistical packages -not just spreadsheets but time-series programs. ... I also see the LAN system works very slowly. Somehow its not well configured for using LOTUS. I'd like to see some of the bugs come out of it. Its not properly configured for using Harvard Graphics 2.3. ... I'd like to use 2.3 [rather than 3.0], but I can't print. Hence I have to produce my hard-copies by first translating the HG files into WPG files. Its annoying."

● **What would you like to see included in the computer system here?**

"Better configurations. Quickness: reduction of the timing problems. Quicker printing, and greater coordination between hardware and software. I also don't see why they can't figure out so it wouldn't make any difference which goes on first, the printer or the PC! ..."

● **What do you think the role of the Computer Services Division should be, in general?**

"From time to time I have system software problems, so I want them to be available when I call them to strengthen things out for me: *service*. I want them to work on the system problems that I already explained. I suppose they have a teaching role, but I don't like to go to computer courses ..."

● **Do you have anything else on your mind regarding computers, information technology ...?**

"Over-bureaucratized. We should have been able to get these stuff a year earlier, two years earlier"

Date: February 22, 1994

Interviewee: Thomas Clarkson

Title: Controller ²⁰

Division: Controller's Office (CONT)

● **Can you tell us, in short, what are the goals of your division?**

"The Controller's Office helps the Mission to create its *operating expense budget (O/E)*. We account for use of the O/E money and project funds each year. We report both to mission management and to Washington on the amount of funds available, the purposes for which they are available and the amounts that have been obligated. ... In addition to budgeting and accounting, our office handles the payment requests for both projects and O/E. We do payrolls for the Mission, and we are also responsible for advising the Mission on financial management aspects of project design; we are responsible for helping the Mission to ensure that its grantees and its projects are properly audited, and that the systems that the grantees and other recipients have for keeping track of AID money are up to the task. We're also responsible for ... the annual review of internal controls of the Mission, to identify weaknesses and recommend actions to correct those weaknesses." In summary, the Controller's Office responsibilities fall into: 1) Preparation and liquidation of O/E budget, 2) Accounting of project budgets -which the Programs Office creates, 3) Payments for the whole Mission, 4) Coordination of the internal control review process of the Mission, and 5) Review of the recipient accounting systems.

● **What types of data or information does your office deal with or is in need of?**

²⁰ *Controller or comptroller* is defined as "an officer who audits accounts and supervises the finances of a corporation or governmental body" (Webster's Dictionary).

"We deal with historical information on O/E costs. And then we deal with allotment information of funds that have been obligated to Mission to spend. We deal with information on all of the regulations that apply to AID activities -in order to determine if procedures are being followed and payments are appropriate. We deal with all of the project paper documentation that come for us for review to see if they're adequate; that includes the project papers, the plans for the projects, the implementing letters, all of the documents that set aside money, all of the contracts, and all of the vouchers. We deal with reports from our entities in the government that help to manage AID funded activities. Its almost impossible to tell you all the [data] that our office deals with ... Anything which has to do with audit, project design, project implementation, payments, contracting, obligations, and with setting aside of funds ..."

● **Are current information technology and information systems at your disposal supporting the goals of your division?**

"They support them, but they can be improved."

● **Would you like to elaborate on that?**

"Clearly we should all move into the LAN system so we would be on the same network. We need better ways of sending our information up to Washington and I assume that that's going to happen pretty soon. ... The problem is that we take a large amount of information that we generate here and we put it on paper and send it to Washington. Which means that it all has to be re-keyed and that's ridiculous ... All of our accounting and payments information should be just as much accessible to Washington as it is to us. ... At the moment we either send our reports by paper, by E-mail or other electronic means, but what we are sending to Washington are reports. It seems to me that we should be able to send in the whole data sets and have Washington extract whatever reports they need. Basically, in the U.S. Government, for ten years now we are supposed to have [had] single entry for each accounting transaction. We have not achieved that goal yet. We should be able to enter a transaction once in input point and the system should aggregate that information automatically to whatever summary levels or higher levels of the organization needed".

● **What are a few critical information which your division needs in order to succeed in its goals? In other words, what are your division's *Critical Success Factors*?**

Mr. Clarkson responded that those would be the following, however not necessary in order: 1) handling of payments in a timely basis, 2) issuing of reports in a timely basis both to mission management and to Washington, 3) managing of budget, 4) properly running our audit and audit oversight programs, 5) proper coordination of mission internal control reviews, 6) summarizing project documentation in simple accounting structure, and 7) have documents which leave this office contain information that comply with AID regulations.

● **What are your feelings on the concept of sharing of data and information?**

Mr. Clarkson stated that he is in general agreement with the concept; never-the-less there exist certain types of information within the Controller's accounting system which should be guarded: information such as people's salaries or medical histories are as such; also, for example, certain information related to project budgets should be kept secret from project bidders. Mr. Clarkson emphasized, however, that the existence of a database that everyone could tap into is a good idea.

● **Last year's AID/washington's ISP (Information Systems Plan) had the two goals: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* computer systems. How do you think AID/El Salvador can go about the development of corporate or shared data?**

Mr. Clarkson thought of the idea of providing project managers access to their projects' accounting



data; he mentioned, however, those information are not easy to comprehend and that a financial analyst or accountant may be needed to aid the managers. He added that the Controller's Office produces standard types of reports which are sent out to those same managers and that presumably they would access those reports directly rather than having access to the whole account information. Further on the concept of *corporate data*, Mr. Clarkson mentioned that facilitating the sharing of certain data with AID/Washington -as mentioned above- would be valuable. Mr. Clarkson added that AID/Washington is already developing a system called *Washington Accounting and Information System (AWACS)* where financial information from all the missions would be routed into a data clearing-house and then analyzed from there. One component of AWACS requires that all the missions including AID/El Salvador convert their MACS system to the new UNIX computer. As far as corporate data and this Mission, Mr. Clarkson brought up the idea of asking the project managers what their needs are and consequently creating "custom-made reporting programs" of financial and accounting data which would be accessible through the system and tailored to their needs.

● **Would these data, in your mind, be accessible to all in the Mission?**

"The accounting database," Mr. Clarkson continued, "cannot be accessed at the moment by the whole Mission, because not everybody has the password or the need, but certain parts of it could be provided to project officers." Mr. Clarkson added that "tailor-made reports" could be created in order for those project officers to meet their needs.

● **What are some of the other type of information that all of the Mission should have access to?**

"It would be helpful if we all were on *one* type of word-processing, for example." furthermore, Mr. Clarkson stated that all of the handbooks and standard regulations should be accessible to the whole Mission, as well as standard guides as the *Mission Order* and *Mission Operating Manual*.

● **Do you think that the major reports that USAID/El Salvador publishes during the year, such as the *Semi-Annual Reports* or the *Action Plans* or the *Annual Budget Submission*, should also be available through the system?**

Mr. Clarkson state that he thinks they should be made available to the Mission staff who are "authorized users". He added that certain information should not be made public; for example, the government should not be made available the *Annual Budget Submission* document which would give them an idea of how much money is available. Mr. Clarkson further noted as how a document such as the *Action Plan* is not "standardized" in that it is formed of various types of programs and subsystems, making it difficult to transfer across to Washington.

● **Do you think that there should be guide-lines as to how these documents are written and put together?**

Mr. Clarkson stated that there should be a standardized program which would be able to combine the word-processing and spreadsheets, and merge them into one document. Such procedure would allow the document to stored on a diskette which then could be sent to Washington through a courier or by means of electronic mail.

● **Are there certain applications that you would like to see added to the LAN or the MACS systems?**

Mr. Clarkson said that Mr. Ron Miller has extended the use of the MACS program to include applications such as payroll, bill-for-collections, least calculations, and a number of other applications which cut down the amount of work the Controller's Office has to do.

● **What do you think the role of the CSD should be?**

He responded by saying that his office could use some special assistance with the use of the

Washington-created programs such as the MACS.

● **Do you have any other comments regarding the issues that we talked about?**

"What is needed in the information systems program is people that can provide an interface between different systems and make them work." Mr. Clarkson provided the example of the help his division received from the CSD when it was in need of translating a data-file into a different format in order to be sent to Washington. Another example is that of the RAMSI system in Mexico which is to receive financial information through a modem from here and produce the actual checks without human interference; this process sometimes works and sometimes doesn't. Mr. Clarkson stated that: "We are all in our own box. We need some office who can bring these boxes together and find out what is the little barrier which needs to change in order to make these systems work properly. When box A tries to work with box B through interface C, and it doesn't work, there's no one who can research the problem ... That's basically what you need from an information systems office. Being able to tie all these different boxes together" □

Date: March 1, 1994

Interviewee: Juliet Evans

Title: Voucher Section Supervisor

Division: Controller's Office (CONT)

● **Please briefly describe your responsibilities within the Controllers Office:**

In response, Ms. Evans stated that her office is responsible for supervising the Vouchers Section. She makes sure that payments are on time, no later than the 30th day of the month and no earlier than the 23rd day of the month. She added that her office also oversees that the host-country institutions' spending patterns are properly documented and conducted.

● **What types of *data* or *information* does your office deal with and/or is in need of?**

Ms Evans stated that the Controllers Office utilizes a computer software called MACS-TRACS. It monitors the status of the vouchers which are periodically reviewed by an examiner. MACS-TRACS also allows the Controller's Office to pay AID/El salvador vendors promptly.

● **Is the mentioned MACS-TRACS system supporting your section's goals and activities?**

Ms. Evans responded positively to the above question and added that the system could use improvement. She added that although AID/Washington has improved their system, it still has deficiencies. For example, the MACS-TRACS is not functional on a quarterly basis, and that her section is *required* to produce certain reports on a quarterly basis. Ms. Evans further commented that Ron Miller, the MAX administrator should comment on that further.

● **In your opinion, what are the few critical information that your division needs in order to succeed in its activities? In other words, what are your division's *Critical Success Factors*?**

Ms. Evans stated that they are access to RAMC (Regional Accounting Management Center) and an improved MACS-TRACS system.

● **What are your feelings about the idea of sharing of data and information?**

She responded that not everyone should have access to files and be able to edit their contents. In

addition, she stated that a given division may not know how to interpret the data generated by the Controller's Office.

● **How do you think AID/El Salvador can go about the development of corporate or shared data?**
Ms. Evans responded that in her opinion her office should share the type of data with technical offices that they can understand; and that such a concept of sharing of data will save time. She added again that the MACS-TRACS could use improvement. And that the training that the CSD has provided has also saved her office time.

● **Do you have any other comments regarding the topics discussed in this interview?**
Ms. Evans recounted a situation in which a "backup" procedure conducted by the CSD somehow went wrong and resulted in the loss of the data. In another incidence involving data from the MACS, data which were to be erased, were not, and therefore the office in Mexico had received false information. She further stated that the MACS-TRACS backup is also conducted by the CSD, and that therefore they should take more care in the backup procedure.

● **What are your thoughts on the usage of paper, and is your office attempting to use less of it?**
Ms. Evans responded that her office is attempting to use the E-mail system for some transactions in order to counter the use of paper. She also mentioned that the *Volcano News* (the publication of Embassy and Agency social news) will only be duplicated for the people in her office who ask for it

Date: March 7, 1994

Interviewee: Roberto Brito

Title: Chief Accountant

Division: Controller's Office (CONT)

● **What are your responsibilities in the position of Chief Accountant?**
Mr. Brito stated that he the division's expert Accountant who is to give the Controller advise on an array of accounting issues.

● **I assume that you deal with a lot of numbers; what type of data or information do you regularly deal with?**
Mr. Brito responded that he basically deals with the outputs which the two systems of MACS (Mission Accounting System) and MACS-TRACS produce. He added that originally the system was designed to track the various vouchers, verifying that they are based within the Mission guidelines. Currently, however, the system has evolved and it has the ability to "post or register the dispersement into the accounting records".

● **Do you think that the two accounting management systems that you described and other information technology at your disposal are supporting your activities and goals?**
"Yes, I would say so."

● **What are three or four activities that your division has to undertake in order to be successful? In other words, what are your divisions *Critical Success Factors*?**
Mr. Brito stated that there are too many activities necessary for the success of the division. He went



on to name three of the most important activities with some sub-activities surrounding them: 1) *end of fund report* which is sent to Washington and has to be on time, 2) *prompt payment violation* which requires the Controller's Office to pay the vendors within a given time period, and 3) the act of monthly financial *reconciliation* between CONT Office and the RAMSI Office (United States Dispersing Center) in Mexico.

● **What is your opinion on the concept of sharing of data?**

Mr. Brito stated that if the sharing of data "is timely", it is worthwhile. However, if "it is very much after the fact, ... there is not much use in it." Mr. Brito brought the example of a given report which was sent from AID/Washington last March regarding project implementations which had begun in the following September. Mr. Brito stated that this type of delayed access to information is not helpful.

● **Last year's AID/Washington's ISP (Information Systems Plan) had the two goals: 1. Establishing corporate data that everyone could use, and 2. Building cross-organizational computer systems. Do you have any ideas on the concepts of corporate or shared data and cross-divisional computer systems? For example, what are the divisions which your office deals with the most?**

Mr. Brito responded that he deals with all the technical offices including ECON, PRI, and DPP. Mr. Brito stated that the ideal would be for the project managers to be able to access their accounts directly and have their questions regarding the details of the project finances answered. The managers could look up one of the reports that the MACS-TRACS produces -the P-19 or the *project financial report*. It would give them the project number, the beginning and ending date of the project, the budget, and all the financial activities as of a given date. "This would improve the mechanism of document [and information] flow in the Mission". He said that currently the project manager has to come to his office in order to inquire about his/her project's finances.

● **Seems like your information system is programmed within the MACS-TRACS which works with the Wang system. What will happen to MACS-TRACS now that we are in a transition to the LAN? Mr. Brito stated that in fact the MACS-TRACS programs of all USAID missions worldwide will be transferred to the UNIX, not the LAN. The specific problem that CO in USAID/El Salvador is facing is that they had created some additional report-generating programs which need to be made compatible to the UNIX.**

● **Beside the project update information which you had mentioned should be made available to managers, what other information do you think should be made available from your office to certain individuals or all the staff of USAID/El Salvador?**

Mr. Brito stated that the CO Office has to be cautious since it has the responsibility of keeping "the integrity of the system". Mr. Brito suggested that a *read-only* method has to be developed that would allow at least the project managers, solely, to view information.

● **There is a document called the *Annual Budget Submission*. Is there a similar document which would indicate the actual amounts spent for a given year? Since the actual money spent could be more or less than the submitted budget.**

Mr. Brito stated that these types of report are all accessible through the CO computer system. However, he mentioned that besides CO and DPP who coordinate to put the following year's budget together, in his opinion, no other office would be interested in viewing such documents.

● **Do you think that any other type of information technology should be added to what USAID/El Salvador has at the moment?**

Mr. Brito stated that rather than adding additional technology, it would be appropriate to improve the existing system. As an example, he mentioned that the MACS-TRACS system which is suppose to cover all the typical accounting activities that a given AID mission encounters, is not able to take in some types of transactions. Another problem with the MACS is that it cannot produce a monthly summary of the financial activities of a given project; currently it can produce quarterly financial reports. However, MACS being a AID/Washington created and monitored program can only be improved through them.

● **What do you think the role of the Computer Services Division should be?**

Mr. Brito responded that their primary role should be in training since "we are underutilizing the resources that we have". He added that most staff add to their computer skills either through help from another who is more skilled or through the manuals. He stated that beside the introductory classes, there should also be advanced training in various computer packages.

● **Would you like to see a specialist helping your division out with its computer needs?**

Mr. Brito stated that the Controller's is a unique office in terms of computer needs and currently Mr. Ron Miller is the individual with expertise in the MACS and MACS-TRACS, and that he may not be with the Mission for too long. Mr. Brito added that CO could use a back-up person who could take over when Mr. Miller leaves. Mr. Brito stated that CSD should be involved in this issue

Date: February 25, 1994

Interviewee: Rita Dale

Title: Communications & Records Supervisor (C&R)

Division: Executive Office (EXO)

● **Can you tell us, in short, what are the goals of your office?**

Ms. Dale stated that her office is in charge of sending, receiving and distributing correspondence. Other forms of communications such as telephones and faxes also fall within her offices responsibilities.

● **Do you think the computer technology available to you is supporting your office's activities?**

Ms. Dale said that there are weekly *delinquent* reports that require daily input of data regarding the number of stamps and other commodities which have been used. This is where the technology comes in handy.

● **Is your office ever approached by other divisions in search of certain information?**

Ms. Dale responded that her office keeps copies of all documents received from Washington or locally. Hence, the C&R office can help divisions who are searching for an official fax, cable, administrative notices, etc.

● **What do you think of the idea of sharing of data?**

Ms. Dale responded that it would depend on the type of data.

● **Are there any other points that you would like to add?**

Ms. Dale stated that she would like her office receive the PCs that she had been promised



Date: March 10, 1994

Interviewee: Margarita San Feliue

Division: Social & Economic Research

Organization: FUSADES (Fundacion Salvadoraña del Desarrollo Economico y Social)

● **Can you tell us what are the responsibilities of FUSADES?**

Ms. San Feliue replied that FUSADES stands for the Salvadoran Foundation for Development. It studies the social and economic development of El Salvador in addition to sponsoring some "practical projects".

● **What does the Social and Economic division do?**

Ms. San Feliue responded that her division deals with micro and macro economic issues and sectoral concentrations such as energy conservation and agriculture. Another section deals solely with social issues such as housing, transportation and health. Ms. San Feliue's section has the two responsibilities of following on the volume of production and analysis of prices. She added that the data are partially gathered through surveys conducted by her division.

● **What entities does your office deal with in order to access its data?**

Ms. San Feliue stated that it is a combination of private and public agencies. For example, the volume of cement consumed can be determined through the company which produces it, or the amount of electricity used is obtained through the electric company, and so forth. She mentioned that her office is in contact with close to 600 different enterprises.

● **Ms San Feliue asked this writer as to how these questions will help my study at AID?**

I responded that since FUSADES is partially funded and is in direct contact with USAID/El Salvador, this writer is interested in how to facilitate the transfer and sharing of information by the two agencies. At this point Ms. San Feliue stated that the data that her office gathers are confidential -to USAID or even the other divisions within FUSADES- but that the reports that they put out are free for all to view.

● **What type of information do you deal with?**

Ms. San Feliue stated that the documents that her office puts out are mostly composed of text information. There are some figures involved which are obtained from the Central Bank.

● **How are these numbers obtained? Through hard or soft-copy?**

"Hard-copy".

● **Are the current information technology at your disposal satisfying your needs?**

Ms. San Feliue responded that her office is in the process of acquiring some additional computer equipment, but that the process of approval is lengthy.

● **What would you say are three or four objectives which if your division accomplished, it would consider itself as successful? In other words, what are your divisions *Critical Success Factors*?**

Ms. San Feliue stated that the most critical factor is *timeliness* of information. However, she added that this is to a large extent out of their hands because it depends on the speed that the Central Bank and other public institutions make their data public. The only area which her division has control over is in the conducting of the surveys.

● Last year's AID/Washington's ISP (Information Systems Plan) had the two goals: 1. Establishing *corporate data* that everyone could use, and 2. Building *cross-organizational* computer systems. Do you have any ideas regarding the idea of shared data?

Ms. San Feliue responded that the only information that her office puts out are the periodic reports and that USAID/El Salvador would not necessarily be interested in tapping into FUSADES's computer system just to look at those reports. She added that an area which AID may be interested in would be the finances, but that after the coming September, AID's funding of FUSADES is ending.

● Do you have any other comments regarding the points we discussed?

Ms. San Feliue repeated that the only information her office can share are the periodic reports they put out. She added that FUSADES's library is attempting to link with the major libraries throughout El Salvador in order to be able to access their card-catalogues ■

Recommendations to the Automation Committee, EXO, & CSD

The following recommendations relating to information technology and computer systems are meant for the EXO Office, USAID/El Salvador's Automation Committee, and USAID/El Salvador's CSD Manager as inputs towards the final *Information Systems Plan (ISP)*. The recommendations are divided into two series: 1) Recommendations based on and deduced from the interviews with top and middle-level USAID/El Salvador managers; and 2) Recommendations based on this writer's empirical observations.

► Recommendations Based on Interview Results:

1- Shared Data is Better Data: Almost all the interviewees agreed that it is important to share data and information and stated that they are more than willing to share the data in their possession with others. Many expressed their frustrations about the tedious process of acquiring data and information which can or should be readily available to all interested staff. It is suggested hereby that USAID/El Salvador determine the existence, definitions, and policies of the concept of *corporate data* (shared or common data). It needs to identify which data are *global* -that is, data that can be used throughout the Mission-, which data are *shared* by more than one division, and which data are *local* -i.e., they are only used within a given division of the Mission (Brodman 1989 p. 43).

2- Make the Following Public Information Available Through the LAN: Action Plans, Semi-Annual Project Reports, Annual Budget Submissions, & Program Objective Documents.

In addition to the SARs, the Projects Office puts out quarterly updates of the same type of information which, inter alios, the Mission Director views. There is no reason why all USAID/El Salvador staff and visitors should not have access to the above documents. Rather than utilizing too much time within the USAID/El Salvador offices in search of a given document or piece of information, an individual should be able to look up and search through the documents through the computer network. There is also a need for a simple user-friendly document summarizing the activities of USAID/El Salvador both in English and Spanish. The provision and ready-accessibility to the above documents and information go beyond organizational needs. Such provision and access to information by USAID/El Salvador staff and interested Salvadoran citizens -who are the recipients of aid- are part of international law. Indeed, *access to information and legal resources* are among the series of *Rights of Participation* of recipients of aid which are guaranteed by the various international treaties including the Universal Declaration of Human Rights and many ILO (International Labor Organization) agreements (Paul 1989 p. 83) ²¹.

3- Show Monthly Up-dates of All USAID/El Salvador Projects and Offices on the LAN. Each of the approximately 40 projects of USAID/El Salvador has a project manager who is required to have updated reports on her/his project. Such reports should be posted on the LAN, preferably on a

²¹ Other *Rights of Participation* include: freedom of project affected people to form their own associations, freedom of communication, access to media, access to officials and agencies, access to institutions (judicial and otherwise) (Paul 1989 pp. 83-84).

monthly basis, for all interested parties to view. Director Costello stated that the availability of the project up-dates would allow the Mission to monitor the progress of those projects and be able to flag existing and upcoming problems (refer to the interview with Director Costello in the Transcripts/Summaries of Interviews section). The same can be said of the currently twelve Offices of the Mission. Each Office Chief, whether technical or supportive, can produce a monthly update of the activities of her/his sector and make those information available to the staff through the computer network system.

4- Show Quarterly Update of Strategic Objective Management Team Reports. As Director Costello has said, USAID/El Salvador is not merely composed of a portfolio of projects, it is an "...integrated program where we are *managing for results* and where we have ways [of] measuring our progress". Each Strategic Objective has a responsible team, composed of individuals from various Offices who meet regularly and attempt to assess that Strategic Objective. Their updated quarterly report of progress should be available through the LAN system.

5- Shared LAN Account for each Strategic Objective Team. Some interviewees expressed interest in this concept. A shared LAN account will allow a given team to work on the same document or database without having to deal with hard-copy or disc transfer from one office to another.

6- Test and Incorporate LAC Bureau's Automated Budget & Portfolio Management System (ABPMS) into the Mission. According to the IRM Office, the Agency's business activities such as *operations management, core accounting, procurement management, property management, annual budgeting, communications budgeting, etc.* can all have their processes facilitated and accelerated by using common information management schemes (USAID/Washington 1993-d). Recently, the Mission has received a demonstration disc from LAC/DR on the subject of ABPMS. According to a memo from LAC Director Eric Zallman (dated January 12, 1994), ABPMS can aid Office Chiefs and Project Managers in managing their project data in terms of project monitoring and preparation of SARS (Semi-Annual Reviews). The second release of ABPMS is to have additional capabilities for project management based on strategic objectives and "will facilitate automated updating of Action Plans" (USAID/Washington 1994-a). The ABPMS package is programmed in FOXPRO. It is hereby suggested that: 1) the ABPMS sample package be examined, preferably, by a joint team consisting of an individual from the CSD and one from the Controllers Office; 2) after the testing of the demo disc, a detailed communiqué be forwarded to the LAC/DR as requested by Mr. Zallman's memo; 3) if found of utility, a workshop on the use of ABPMS be scheduled and jointly organized by the CSD and CO. The incorporation of ABPMS or a similar system sanctioned by USAID/Washington would greatly aid in the promotion of the concepts of *computing compatibility*, use of *corporate data*, and better and more efficient management of projects' data.

7- Create a Directory of General Information and USAID Projects Information based on Salvadoran Geographical Divisions. A couple of interviewees thought that a system of information based on the geographical regions and administrative divisions of El Salvador would be of good use to the Mission. Currently the divisions of IRD/NRD and IRD/RUD are in the process of developing a database system using FOXPRO to store project information based on prefectures and municipalities. As Mr. Lynch of IRD/NRD has stated, this type of system would allow easy access

to information for a given region of the country as to the number and type of USAID projects functioning there, the Offices involved with those projects, etc. It is hereby suggested that the system which IRD/NRD and IRD/RUD are putting together be analyzed, and if approved, extended to the whole Mission.

8- Allow USAID/Washington Access to USAID/El Salvador Information through Modem Connection to LAN. AID/Washington's ISP indicated that "AID's decentralized decision making requires a strong communications infrastructure for consistent and timely direction from Washington coupled with clear accountability reporting from the Missions. This cannot happen without timely access to consistently defined data regardless of its location anywhere in the world" (USAID/Washington 1993-d p. II-4-3). Currently, however, when in need of information from USAID/El Salvador, the various offices of AID/Washington have to contact the Offices here and subsequently receive hard-copy or diskettes of information. This information often requires much time to prepare and subsequently is not instantaneously received by AID/Washington. It is either mailed or pouched. With the availability of the above information on the LAN system and the assigning of a shared account for AID/Washington Offices, with a modem connection those offices would be able to reach the LAN system and have *read-only* accessibility to their desired information instantaneously.

9- Extension of the Concept of Corporate Data to Host Country Institutions. Although this writer interviewed only one individual outside of USAID, this sole interview with an individual of the Social and Economic Research section of FUSADES gave this writer the impression that there is very little exchange of information between that organization and USAID/El Salvador. This point is interesting because, to the knowledge of this writer, FUSADES is a brain-child of USAID and much of its funding has been through this Agency. There may be times that FUSADES and USAID/El Salvador, both of which are engaged in development studies and work, are duplicating the same study or database. In general, the sharing of information between USAID/El Salvador and other institutions with similar goals would be beneficial for both sides. It is recommended, therefore, that a closer association be made between AID/El Salvador and Salvadoran public and private institutions, whether they be research, academic, or governmentally oriented. Those agencies, in turn, should be made aware that the plethora of information and reports that are generated by USAID and/or exist in its library are for their use also. Currently, awareness of this issue on the part of the Salvadoran counterparts and institutions and encouragement of data sharing on part of USAID/El Salvador does not exist.

10- Implementation of Identical and Regulated Office Management Information Systems (MIS). Currently, either the various Offices of USAID/El Salvador do not have an office MIS (Management Information System) or in the case of availability, each uses a different system. This is a critical issue since the development of divergent and non-compatible systems can be costly. A certain MIS tailored to the needs of AID/El Salvador was proposed to be developed in 1988. This MIS was to have used the Mission's existing MACS (Mission Accounting and Control System) and generated up to 20 different financial reports (USAID/El Salvador 1988). That proposal was never fully implemented. The CSD and the Automation Committee should make sure that individuals responsible for creating and/or managing of their respective Office MIS meet on a regular basis. In consultation with AID/Washington's Office of IRM, to the extent possible, the same type of system/software should be used for communication among divisions, scheduling of meetings, and trans-divisional transfer

of data and information. Currently, the Director's Office is using the program Cal-Lander as its agenda-scheduling software, which brings us to the next point:

11- Provide a Mission-wide Scheduling Program through the LAN. Some interviewees including Director Costello expressed concern about the time wasted by offices and managers in the apparently simple process of scheduling of meetings. Fortunately, information technology can be of great help on this issue. Such offices as the Director's and IRD/NRD are utilizing a scheduling program called *Cal-Lander*. This program allows the users to schedule or reschedule given meetings by automatically contacting the various members who are required to be present in the meeting. It is hereby suggested that this program or a similar kind be utilized through the LAN for scheduling meetings and events for all USAID/El Salvador offices and staff. A program should be selected which also would have the ability of passing on documents for review and approval through the system. These functions would enhance the efficiency and effectiveness of the Agency.

12- Formation of an *Environmental Awareness Committee*. Information technology is a modern phenomenon which can be beneficial and promote efficiency. This modern good, part of the *development* package of the Western world, produces a lot of waste and garbage as well. Used computer papers, empty ink cartridges, styrofoam and cardboard boxes used to package and ship the technology, etc., are all the waste that information technology produces. Notice that garbage is also a modern phenomenon; "subsistence economies did not produce garbage" (Lummis 1991 p. 52). Considering these points, it is hereby suggested that just as the Office of IRM in Washington is responsible for carrying out the requirements of the **Paperwork Reduction Act** at USAID headquarters (USAID/Washington 1991-c p. 6), EXO should be responsible for carrying out the same U.S. law in this Mission. Currently, the Deputy Director is assuming that the Salvadoran Employees Association in conduction with EXO are working on the recycling program (see interview with John Lovaaas). That is not the case. Unfortunately, the use of information technology, if not regulated and controlled can lead to an organizational culture of waste which could have wider ramifications than the simple act of throwing away of a piece of paper. It is therefore hereby suggested that an *Environmental Awareness Committee* be formed. Since the average employee of USAID/El Salvador liberally throws away papers generated from the Mission's information technology equipment, the CSD should have a representative on this committee. The other members should be: two members of the Salvadoran Employees Association, representatives from EXO, ANR, and the custodial staff. This writer presented a 12 point conservation and waste reduction proposal to the Director, Executive Officer, C&R, and ANR offices in December of 1993 (refer to Appendix IV). It was roughly calculated that conservation and recycling of paper would generate approximately \$14,000 annually for USAID/El Salvador and \$300,000 for USAID worldwide. In addition, it would promote a culture of conservation and sustainability which are part of USAID/El Salvador strategic objectives and the new Foreign Aid bill likely to be passed by the U.S. Congress (Callahan 1994). It is true that USAID/El Salvador cannot formally generate money by selling any equipment of the Mission. That does not preclude donations, however. The money generated from the recycling scheme should therefore be equally divided, for example, among the Salvadoran Employees Association and the Salvadoran

Fund for the Environment (CONAMA)²² or the Enterprise for Americas Fund²³.

13- Notify the Users as to the Locations of Specific Technology in the Mission. A couple of interviewees expressed interest in the use of CD-ROMs. Many were not aware that the technology to read the CD-ROM discs is available in the Mission. It is therefore hereby suggested that the three or four CD-ROM readers which are available in the Mission be labeled as *public* and be located at a place within each floor where every staff member could have free access to it. Although there may not seem to be much use for such technology by USAID/El Salvador staff at the moment, with the compilation of 33 AID/Washington handbooks on one CD-ROM disc and similar endeavors on the part of AID/Washington, the demand for the use of CD-ROMs will undoubtedly multiply. However, there does not seem to be any reason to buy additional readers or equipment. The existing CD-ROM readers will suffice for a long time to come. CSD's role on this issue is to make known to the staff the location of such technology in the Mission and the training of staff in their usage. The same idea holds for the *scanner*. It was expressed by two interviewees that there is a need for a scanner, but that they were not aware whether or not the Mission had access to one. Although currently one scanner is available, it is hereby suggested that two more scanners be purchased and three administrative assistants be trained in becoming experts in the scanning of documents. Such technicians or assistants should preferably be from the CSD and C&R. However, offices such as PRI who deal with a lot of incoming documents may have need for their own scanners and staff experts.

14- Continue Training/ Offer office-wide training. CSD's training courses were continuously praised; however, most top managers stated that they have not had the time to attend such training. There were also suggestions to continue with intermediate and advance courses in LOTUS and other software. It is therefore hereby suggested that training courses in Wordperfect, LOTUS, and Harvard Graphics be continued. However, such courses can be more productive if students are from a given office. This way, the course can be shifted towards the specific needs of the given Office or Division. Mr. Fred Navarrette should be kept as a permanent instructor and the CSD manager should make sure that Mr. Navarrette is instructing at least four hours daily. Other staff should each teach one course in their area of specialty □

► Empirical Recommendations:

15- Create an End Users' Forum to meet on a monthly basis. The End User's Forum is not a new idea. USAID/Washington has already incorporated such a concept for its system users. AID/Washington's End User's Forum meets on a regular basis to discuss information technology trends and user's concerns on the usage of the LAN (USAID/Washington 1991-d p. II-4-3-5). Although AID/El Salvador has the Automation Committee, a committee of managers who plan for future information technology needs, the Mission does not yet have a regular gathering place for the average system-

²² Environmental trust funds have been developed in various countries to channel private and bilateral sources of finance towards the protection of the countries environment. In El Salvador's environmental trust fund is the CONAMA or *Consejo Nacional del Medio Ambiente* (Wells 1992).

²³ This fund has been formed as result of the forgiveness of some of El Salvador's bilateral debts with the U.S. (refer to interviews with Mr. Cristales and Mr. Straub for further elaboration on this issue).

user to express her/his concerns and ideas. It is therefore hereby suggested that an USAID/El Salvador End User Forum be created preferably composed of one individual per Office who is an average user of the system. The members of this forum can be project managers, administrative assistants, or secretaries who would bring ideas to the forum to be discussed and consequently relayed to the Automation Committee and CSD.

16- Incorporate E-Mail into thy system. At the moment, although USAID/El Salvador has the Banyan Vines E-mail system, the staff and administration are not utilizing it to its fullest extent. The E-mail system has a tremendous amount of potential for *inter-Agency* and *intra-Agency* use. At the moment, for example, all memoranda are written, multiplied on hard-copies and circulated by hand to the staff. This process is more appropriate for the 19th century governmental labor. Another example is that of the booking process required for buying a ticket from the in-house agency of U-Travel at the headquarters of USAID/El Salvador. The process can be accelerated if the agents at U-Travel are all on the USAID/El Salvador E-mail network. This way, time and therefore money is saved for USAID/El Salvador and USG. Further, on the general concept of memoranda:

17- Minimize the use of Memoranda and E-mail them. Currently memoranda throughout USAID/El Salvador and the embassy are going out at an alarming rate with information which is regularly of no use to the receivers. One interviewee referred to these communiques as *basuranda*²⁴. It is hereby suggested, therefore, that when it comes to the issue of information dispersal through memoranda, that they be 1) fully restricted to useful information for an intended audience, and 2) for the sake of expedience, cost-saving, and environmental awareness, all memoranda be E-mailed. Once all the bugs of the internal E-mail system are lifted, and the staff have been given a simple instruction for its use, a deadline should be set after which all and any memoranda should be transmitted by the E-mail system. The hefty *Volcano News* newsletter can also be put into the E-mail system. Most readers throw the 15+ page *Volcano News* handout directly into the wastebasket after a minute of reading. An idea would be to put the day's events on the screen; i.e., when one logs on to one's account in the morning, one would be able to observe what are the social and administrative events of the day. All effort should be taken, therefore, to *minimize* the use of paper in this *pro-environment* agency (not to mention the savings in time spent in the tedious process of reproduction and distribution). As Director Costello stated during his interview: "we should be moving towards the *paperless office* which is spoken about so much".

18- Save Money on Faxes by Scanning and E-mailing of Documents. According to a recent EXO memorandum (N^o 94-61, 3/28/94) on the topic of *Transmission of Faxes*, lengthy documents as voluminous as 123 pages have been faxed to the U.S. and other parts of the world from this Mission. The faxing of a 123 paged document with a telephone transmission time of 1.48 hours is wasteful in terms of both time and money (\$167.51). The questions which need to be raised are: i) why have such hefty documents been allowed to be sent to the U.S. and other locations through such a costly method? and ii) why haven't similar documents been simply E-mailed out of the Mission,

²⁴ An example of such memoranda is that of such and such a division head going on an R&R trip for 3 days. One wonders why the entire 250-plus staff of USAID/El Salvador should be reminded of the short personal vacation of one of the many division heads of this agency!

allowing the savings of thousands of dollars annually? One interviewee suggested that USAID/El Salvador should purchase the technology which would allow the sending of faxes through one's terminal. If additional scanners and equipment needed are purchased by USAID/El Salvador to make documents E-mail-compatible, in lieu of EXO's current monthly fax costs, such purchases would no doubt save money and time for the Mission in the short and long-term. In addition, further cost savings can be reached through a study of the C&R office for ways to make it increase its viability and efficiency in receiving, sending, and distributing cables, faxes, and memoranda. As of 1991, for example, AID/Washington received as much as 1300 cables daily from around the world. Under IRM's *Cable Room Upgrade*, it planned to replace the "outdated and expensive system" in FY 93 (USAID/Washington 1991-d). USAID/El Salvador should emulate similar cost-saving tactics.

19- Look into the possibility of a USAID-US Embassy/El Salvador E-mail system. Currently the two entities of USAID/El Salvador and US Embassy/El Salvador act as two separate entities with little or no interaction. However, there are elements or offices within the two organizations which overlap in terms of function and data/information needs. For example, both have divisions of economics and the USAID/ODI Office has a lot in common with the political office of the Embassy. The USDA (U.S. Department of Agriculture) representative of the USG in El Salvador also has a lot in common with USAID/ANR. Director Costello has stated that he is in daily communication with the Ambassador and the country-team. Through a joint E-mail system, communication among the two entities of USAID and US-Embassy in El Salvador can improve leading to the refinement of the whole US Mission in El Salvador.

20- Find Optimum Ratio of Staff to Information Technology. There seems to be extremes in the provision of information technology to the various divisions of the Mission. On the one hand, for example, a project manager from the Projects Office informed this writer that the whole division of PRJ has one laser printer, and that individual believed there is need for more. On the other hand, a division such as OET has been assigned five laser printers, a seemingly excessive number relative to its number of staff. It is therefore hereby recommended that 1) the various divisions be treated equally when dealing with information technology (unless there is an Office which is in dire need of a specialized technology) and 2) an *optimum* ratio of staff members to a given technology (such as PCs, laser printers, scanners, CD-ROM readers, copy-machines, etc.) be determined. There should not be a shortage or an excess of a given technology, the former leading to slowness and increased bureaucratization, the latter to unsustainability and waste.

21- Plan an environmental awareness and conservation/waste reduction workshop. In line with other recommendations relating to conservation of paper, the Environmental Awareness Committee -which was previously suggested to have as its members, inter alios, representatives from EXO, CSD, C&R, and ANR offices, should plan a professional conservation/waste reduction workshop for USAID/El Salvador staff. This workshop should, inter alia, emphasize that over 98% of Salvadoran original forests are gone, that paper is made out of wood and that every employee is expected to comply with certain waste reducing principles. During his interview, the ANR Division Head agreed that an environmental seminar or workshop would be a good idea for this Mission (see interview with Gordon Straub in Summaries/Transcripts section).

development and foreign aid, should view information technology as a technical good which can be transferred to the recipients of U.S. aid, i.e. Salvadoran host-country nationals. This transfer of technology should be done by close and organized association of U.S. and host-country nationals. For example, this writer who has been an intern with AID, in addition to his respected supervisor, could have been assigned a host-country national as a *counter-part* and/or *assistant* who would have helped and learned from the process of the SITPLAF research study. This is not, in the least, an implication that U.S. nationals have nothing to learn from host-country nationals. Indeed, both sides can be enriched through closer cultural and technical exchange. In addition, statewide training should primarily be reserved for the host-country nationals (this applies to all disciplines, not only information technology). USAID/El Salvador should bear in mind that the recipients of U.S. foreign aid are the host-country citizens and ultimately it is they who will remain in the country and the transfer of technical know-how would be most beneficial if done through them.

23- Establishment of an AID-USIS Embassy Library/Information Center. While checking out a book at the AID/library, this writer accidentally overheard a conversation between two American librarians. One was telling the other that she should eventually *throw away* some of the books on a random basis, since there is not much space left in the library. In the opinion of this writer, that would be an unwise decision, considering that *any* type of information which has been produced in hard copy is valuable, and if AID/El Salvador can not use it, there are most certainly other institutions and libraries in El Salvador which would be more than happy to receive it. However, the fact that a bigger library or information center is needed is correct. Therefore, it is timely that AID/El Salvador in conjunction with the American Embassy create a modern library in their joint compound; a center which could be accessed by AID staff, contractors, and outside institutions. The concept of shared or *corporate data* should not be limited to AID offices. An ideal location for such a library would be a place similar to the current location of the commissary ■



Concluding Remarks

The propose of this study, USAID/El salvador's 1994 *Strategic Information Technology Planning Framework* (SITPLAF), has been to prepare a document serving as a basis for USAID/El salvador's 1994 *Information Systems Plan* (ISP). SITPLAF's recommendations for the ISP were based on and deduced from the more than 30 interviews with top and middle level managers and decision makers of AID/El salvador, in conjunction with the broad review of Mission and AID/Washington documents. All attempts were made to extract accurate and ample data on information technology and its use at the Mission's administrative and technical levels.

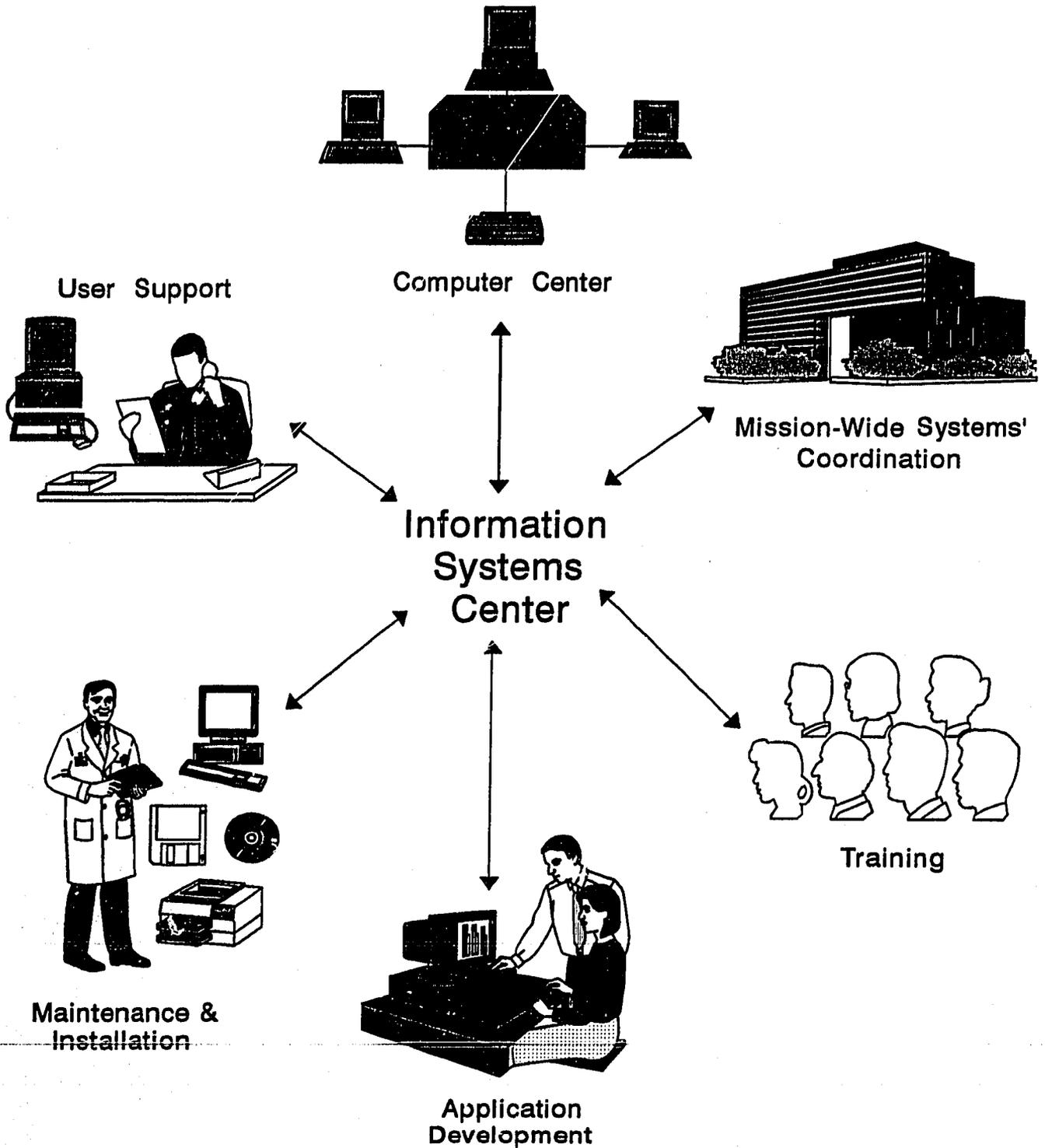
It has been argued that statistics such as social and economic development are skeptical or lacking in many Third World countries. More may be known "about VCR imports than about child literacy or maternal mortality" (Williams 1993). Although not a study of social and economic development, SITPLAF is indirectly related to Third World development, having as its subjects, the managers of a major international development agency -USAID. The availability of the interview transcripts and summaries are good research building blocks. Furthermore, once the planned USAID/El salvador questionnaire/survey on information technology is carried through, more useful data will be available.

An up-to-date feedback of end-users' and critical decision makers' ideas and needs as related to information technology is necessary for the successful operation of the Mission's Computer Services Division (CSD) and the preparation of the ISP document. An annual or biannual series of interviews and/or staff-survey on information technology can be of significant help. Future schemes for similar SITPLAF studies can built upon and improve the research process of this report. Future researchers can also compare and contrast their data on attitudes on information technology and goals with those of the 1994 report provided here.

The Computer Services Division plays a vital part in the Mission. Its roles and responsibilities are a combination of technical, advisory, and cooperative positions. Figure XV lists the potential responsibilities of the CSD, or CSD's *functional architecture*. Its role of *mission-wide systems coordination* is specially important in that the concepts of *corporate* or *shared* data and *computing* and *system compatibility* (Gibson 1994) are the at the crux of this report's recommendations.

In as much as the CSD, EXO, and the Automation Committee of USAID/El salvador are encouraged to apply the recommendations arrived at by this report, including the technical recommendations involving the purchasing of equipment or provision of certain *corporate* data through the LAN, it should be borne in mind that information technology by itself cannot serve as a panacea to all the problems facing an organization. According to an article in the *Sloan Management Review*, "people's inability to change, not technology, is the limiting factor in transforming organizations". The main reason behind information management problems for an agency such as USAID as a whole or

Figure XV:
Computer Services Division's
Functional Architecture





(The Arizona Republic April 12, 1994 p. B5)

AID/El Salvador can well be "cultural and/or organizational, rather than technical" (USAID/Washington 1993-d p. 11-5-2). In as much as the importance of information technology for a given organization such as USAID/El Salvador, SITPLAF is *not* attempting to promote a total or over-reliance on such information technology for solving organizational problems.

Furthermore, the bigger picture of both international development and global sustainability should not be neglected here; i.e. one of the rephrased themes throughout this study: the *natural environment*. It would be prudent, therefore, for USAID to approach the issue of information technology from a *whole system* viewpoint, one which includes the technical, organizational, social, and environmental components. Paul Hawkins, the author of *The Ecology of Commerce* asserts: "*biological literacy is more important than computer literacy*" (quoted in Utne 1993). Likewise, although the idea of more computer literate USAID staff able to use information technology should be encouraged throughout the organization both in Washington and USAID missions overseas, and although a computer literate staff, able to take information technology to its limits, is a necessary factor in leading USAID to more efficient and successful development projects, lack of biological literacy and obliviousness towards the natural environment can ultimately lead to the demise of the same development projects. ■

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Appendix I:

Scope of Work of the Information Systems Specialist Intern

The following job description was directed from AID/El Salvador to AID/Washington which in turn announced it in various educational institutions in the U.S. This writer applied for this position in March of 1993 and subsequently began working in El Salvador on October 18, 1993.

- **Position Title: Information Systems Specialist Intern**

- **Basic Function of Position:**

The position is within the Executive Office, Computer Services Division. The Computer Services Division maintains all computer services in the Mission, assists all Mission employees in their data processing work, trains Mission employees in the available computer services and serves as contact with other USAID Missions around the world in data processing matters. The incumbent will be supervised by the Computer Systems Administrator and will have the following duties and tasks:

1. Draft the Mission's Strategic Information Technology Plan. This plan will follow the guidelines prepared by the Educational Development Center under a subcontract (#715304) with Executive Resources Associates from the Office of Information Resources Management. The plan will be presented to the Automation Committee.

2. Create, Implement and Analyze a Mission Survey. The purpose of this survey will be to determine the data processing needs of the Mission in the areas of User Support, Training, and Application Development. The results will be presented to the Mission Automation Committee with the recommendations of the Computer Systems Administrator to assist the Mission in the creation of a long term Automation Plan.

- **Desired Qualifications:**

College work should be in a social science discipline with a special interest in the analysis of quantitative data and information systems management. The incumbent does not need to be a computer science undergraduate, although, some computer skills are desirable. The ideal candidate should, above all, possess analytical skills, the ability to carry on work with little or no supervision and be resourceful to accomplish the tasks above.

- **Justification:**

The training internship will significantly contribute to the Mission as these outputs will directly improve the Mission's Information Systems Program. It will benefit the intern, as the experience obtained can easily be transferred to other fields, but a greater benefit will be obtained if the intern decides to stay with USAID, as these two tasks are basic elements in the management of projects ■



Appendix II: Summary of Brodman's SITPLAF Manual

"A Strategic Information Technology Planning Framework: Getting the Most from Information Technology" ²⁵

This work has five parts:

I. Background on Strategic Information Technology (IT) Planning Framework.

Issues that must be raised and questions that must be asked in this stage include:

- What are the goals and mission of the organization? i.e. "*What is the organization strategy ?*"
- What are the activities taken to carry out those goals? i.e. "*What are the organization plans ?*"
- Are current IT organization and activities supporting the goals of the organization?
i.e. "*What are the information technology strategy ?*"
- What are the specific design of the information systems operations, the hardware and software necessary for fulfilling the IT strategy? i.e. "*What are the Information Systems (IS) plans ?*"
- What are the critical information that managers and other decision-makers in the organization need in order to succeed? In turn, what are a few key activities the organization must do well in order to be successful?, that is, "*What are the Critical Success Factors (CSF) ?*" ²⁶

The Critical Success Factors (CSF) method of IT planning, which is among planning *models that link data to key performance indicators*, proposes that managers should have an information system designed around those critical factors. It is important to distinguish between CSFs and goals. *Goals* are the *end result* you want to achieve. In contrast *CSFs* are the *means* (Brodman 1989 p. 11). Other IT planning methods include *stage models* ²⁷ and *strategic data planning* ²⁸.

II. Basic Concepts of the Strategic Information Technology Planning Framework (SITPLAF).

- The framework proposed in this manual "*is a generic approach to IT strategic planning. To be effective, it must be tailored to fit the [specific] organization [one is working with]*" (ibid p. 9).

Requirements of success for SITPLAF are:

- The planning process must have a sponsor among senior management who believes it to be important as to how IT contributes to the organization. Such a sponsor can ensure that those below him/her will participate in the study;
- The planning team should include general managers, IT professionals, as well as *bridge* individuals who understand both the organizational needs and the IT capabilities;
- The process is most effective if it is conducted as part of the overall organization planning process, linking

²⁵ By Janice Brodman. Prepared for USAID by the Education Development Center under subcontract (#715304) with Executive Resource Associates, September 1989.

²⁶ *Critical Success Factor* information technology planning methodology was introduced by John Rockart in 1979. Background articles are found in Bullen & Rockard, *The Rise of Managerial Computing*, 1986 (Brodman 1989 p. 6).

²⁷ It has been suggested that there are six *stages of growth* in data processing: One) The first PC is adopted; Two) Management promotes the widespread acceptance of the new IT and develops applications justifying its purchase; Three) Computer use grows and management attempts to use them in a cost efficient way; Four) Database management system with growing end-user control spreads; Five) Fundamental shift in attention from computer management to data management; & Six) Stage of *maturity* where computer system is totally integrated into organizational operations (Brodman 1989 p. 7).

²⁸ The *strategic data planning* methods focus on data rather than on computers or applications. IBM's Business Systems Planning methodology is of this type (Brodman 1989 p. 8).

the organization's goals and plans together with its critical needs, and management of its IT resources. In summary the critical success factors of the IT planning process are:

- ★ Keep it simple & focused on critical issues;
- ★ Have an effective sponsor who can *sell* the process to managers;
- ★ Use an experienced team; & again
- ★ *Keep it simple* (Brodman 1989 p. 11).

● Each level of the organization has its own *strategy* or *mission*, its own *goals* set by that strategy; & its own CSFs that are crucial for achieving those goals. Therefore, there are organization-wide CSFs, sub-organization CSFs, and individuals' CSFs (ibid p. 12).

III. Conducting the Strategic IT Planning Framework.

There are six stages in the SITPLAF process:

☛ **1 Clarifying of the overall mission, goals, and objectives of the organization.** The purpose of SITPLAF is "to link the management of IT resources to the organization's strategic goals". In this stage, the research team needs to find out "What are the 'major short and long-term goals of the organization, key functions, programs, and relevant sub-organizations'" ²⁹ (ibid p. 13);

☛ **2 Assessment of the current information system infrastructure.**

● How are the IT resources organized and managed within the organization? IS responsibilities can be organized in a *centralized* fashion, that is, the machines and IS staff are in charge of all data processing; they can be *decentralized*, i.e., all software and hardware being "fully operated and managed by *end user* departments" (ibid p. 14). Or, as most are, an organization can be a *hybrid* of the two. In which case, some of the IS responsibilities are centralized and some are not.

● What are the features of the IS application? Who uses them? What benefit do they provide? What are their comparative cost? How important are they to the organization?

☛ **3 Conduct the CSF Process.**

- What are the few critical things which the organization must do well in order to achieve its goals?
- What are the information managers needs in order to do those critical things well?

In order to know the above objectives, follow the five basic activities:

● **Define goals of CSF process**, "How can IT better contribute to the organization's performance?" (ibid p. 16).

● **Conduct interviews with key players in organization.** The interviews will explore the following themes:

- Key players' views of organizational goals,
- Where major problems in the organization lie,
- Goals key players have set for their own area of responsibility,
- The kinds of information they need to manage well,
- Their view as to how well the IS function fulfills their needs,
- Future information needs,

Questions should be as indirect as possible, for example,

- "What do you think should be the organization's goals? How do you think they can be best achieved?"
- "What are you trying to accomplish in this part of the organization?"
- "You talked about your long-term goals, how about your short-term ones?" (ibid pp. 16-17).

²⁹ For example, the four broad goals of USAID (as an organization) for the post Cold War period are: 1) Promotion of economic growth through free market principles; 2) Advancement in health care and family planning; 3) Democracy building; & 4) Environmental protection and sustainability (The Miami Herald, International Edition, 1993). In addition, the "strategic objectives" or goals of USAID/El Salvador (the sub-organization) have been 1- Transition from War to Peace, 2- Equitable Economic Growth, 3- Enduring Democratic Institutions and Practices, 4- Healthier and Better Educated Salvadorans, & 5- Environmental and Natural Resources Management (USAID/El Salvador 1993-d).

- **Analyze and summarize interviews.** This process should determine:
 - Where the major issues affecting organizational performance lie, and how IT relates to those issues,
 - The extent of agreement among respondents regarding organizational CSFs,
 - To flag important issues and *strawman* CSFs that need to be addressed in the workshop,

● **Conduct workshop with key organizational players**, that is, individuals "who strongly influence the achievement of organizational goals". The objectives of the workshop are to:

- Build consensus about CSFs and their priorities,
- Link CSFs to critical information needs, and
- Identify actions which facilitate the improving of CSFs.

The CSF team should "facilitate discussion, stimulate frank exchange of views, and bring about consensus of CSF priorities" (pp. 18-9).

Link CSFs to information systems planning, leading to the:

- Determination of "IS applications that overlap and duplicate efforts while fulfilling the same information needs", and the:

4 Determination of gaps between information needs and current IS infrastructure, and identification of options to close those gaps.

At this point of the framework, the SITPLAF team should have "clearly defined the organization's critical information needs, derived from its goals and CSFs". They will also have assessed the existing IS organization and services. To determine the gaps among the two -information needs and information system infrastructure, one has to consider the *★ content of information (relevance and accuracy), ★ how it is reported, & ★ timeliness*. For example, "if managers get the information, but in a form that is difficult to use, there exists a gap. If the information is timely but not sufficiently accurate, there is a gap"

(ibid pp. 20-21).

5 Assessing trade-offs among options.

- The criteria in assessing the trade-offs among options are:
- The impact of the option on the effectiveness of IS function, for example, "Will the option result in better delivery of accurate, timely, and relevant information?"
 - The cost and performance drivers, i.e., "How well do the relative level of fixed and variable costs of the option fit the particular organization", "How likely is it for the option to receive negative reaction from top management?", "Are there critical issues of time and budget?";
 - Management and education, for example, "Does the option 'support good quality planning and control, or the development of technical and analytical skills'?" (Brodman 1989 p. 22)

6 Selection of final option, implementing IT strategy, and conducting ongoing planning.

By this time, the planning team should have a list of *best* and second best options. However, in order for the organization to carry through the final option successfully, "[those] responsible for implementing the strategy must feel a sense of *ownership* in the strategy, have a stake in its success, and believe it takes into consideration their own views of what the organization needs" (ibid p. 24). A task force should be formed comprised of those who are to implement the final option. In the task force, three major roles are necessary:

- *End user representative*, an individual who understands the needs of the organization and end users,
- *Technical expert*, one who understands the capabilities of the IS infrastructure, and
- *Senior analyst*, one who can bridge the technical and the end user perspectives.

The planning team should assist the task force in assessing the alternative options based on:

- *Relative costs,*
- *Service levels likely to result,*
- *Urgency of the issue the option is intended to resolve,*
- *Implications for short and long-term ability of organization to solve problems,*
- *The extent of organizational change required by the option, and the organization's ability to make those changes,*

- *Integration of the information system infrastructure and cross-functional synergies*³⁰,
- *A high-level view of the impact of the options on the organization and its ability to achieve its goals.*

IV. Case Exercise: Ministry of Education

● **Formation of an IT Task Force:** comprised of end-user members and IT technical members, its responsibilities should be to:

- *Agree on recommendations for an IT strategy,*
- *Propose the individual who would be responsible for the implementation of each recommendation, &*
- *Monitor the results.*

A question which the task force needs to answer is:

- What are *global* data, what are *shared* data, and what are *local* data of the organization?

V. Templates and Generic CSF Questionnaire

The CSF process should have a *sponsor* (an individual who is respected as unbiased). Ideally the sponsor should send a letter to all the individuals who are to be interviewed and explain the purpose of the study.

And how do we choose the people who are to be interviewed? As a rule of thumb:

- *Start small,*
- *Conduct interviews at least in two levels of the organization,*
- *Choose interviewees who strongly affect the organization's ability to achieve its goals.*

Some rules of interviewing are:

- *Keep the discussion moving,*
- *Try to draw out the respondent, not direct him/her,*
- *When the answers are interesting, follow up on the topic,*
- *If the respondent is hostile or embarrassed about some issue, leave it quickly,*
- *Realize the process of interviewing can be demanding.*

Generic interview questions and its rules:

- *Begin with general questions,*
- *In asking questions about goals, refer to time period,*
- *"Please describe your responsibilities here as"*
- *"What are the most important things you are trying to accomplish here?"*
- *"You've identified x as your short-term goal. What longer term goals do you have this year?"*
- *"... So your mission is?"*
- *"How does your mission connect to the general goals of [USAID/El Salvador]?"*
- *"What organizations and conditions outside [USAID/El Salvador] strongly affect its ability to accomplish these goals?"*
- *"If we were talking with you two years from now, what would you point as the key things you have accomplished since today?"*
- *"How do you intend to accomplish these objectives?"*
- *"What obstacles might make it hard for you to accomplish these objectives?"*
- *"What three questions would you ask if you were away from the office for an extended period? Why?"*
- *"You had expected to attend a one-day conference. You just found out it is cancelled. What will you do with the 'free' day?"*
- *"The head of [USAID/El Salvador] has just approved the extra person you requested. What will you do with him/her?"*
- *"You have just been promoted. What do you think was the major factor?"*
- *"What kinds of information systems support do you get now in your [division]?"*
- *"Is this adequate? Are you getting the information you need when you need it?"*
(sufficiency of information, quality -accuracy-, and timeliness)

³⁰ *Synergy*: when two or more organisms or substances achieve an effect of which each is individually incapable (Webster's II New Riverside University Dictionary 1984).

- *"You've identified a problem with [sufficiency/quality/timeliness]. What do you do when it happens?"*
- *"What could you do if you had that information when you need it?"*
- *"If I were asking you these questions a year ago (or two years ago), would your answers be different?"*
- *"What will happen to your information systems needs in the future?"*
- *"What kinds of information technology do you personally use now?"*
- *"Have you attended any executive [or management] workshops, university classes, or other forms of technology-related education? How have you use that knowledge?"*
- *"As you know [the Director] is beginning to look at the question of whether current IT resources will be adequate to meet future goals of [USAID/El Salvador]. Could you give your thoughts on this effort?"*
- *"How involved are you in this effort? How involved would you want to be?"*
- *"What is the most important thing [the Office Chief] could decide to do next to make the effort successful?"*
- *"Is there anything you were expecting us to ask that we did not yet ask?"* (Brodman 1989 p. 55) ■

Appendix III: Questions Used by ISP/Washington Team

The Office of Information Resource Management at AID/Washington headquarters produced a two volume *Information Systems Plan* mainly addressing the macro issues of information management for USAID/Washington administration (USAID/Washington 1993-c & 1993-d). The questions asked by the ISP/Washington team in their interviews with a sample population of USAID/Washington managers were:

- *With respect to the goals of establishing some corporate data that everyone could use and to build cross functional computer systems, do you have any comments?*
- *If AID were to organize to build a cross functional system, what would be the best mechanism?*
- *Is there a precedent in bringing these types of groups [Finance, Administration, Budget, field project officers, & the controllers] together?*
- *What mechanisms could be used [for the operation of cross functional teams]?*
- *How do you get systems developed for the Africa Bureau?*
- *How should AID organize to prevent [the loss of access to data] from happening again?*
- *When working with IRM to develop a system, what should IRM's role be?*
- *What kind of information systems assistance does the Africa Bureau need?*
- *How do you think AID should go about defining corporate data?*
- *What is the Africa Bureau's responsibility for the information in its own systems?*
- *How do you gather information that you need but is held at different offices?*
- *Do you have any other thoughts about this subject?*
- *What systems should AID control centrally?*
- *How within AID culture do you control system self-proliferation? How do you control user developed systems?*
- *If you could change AID culture, how would you enforce ... standards?*
- *What kind of maintenance backlog do you have?*
- *How are priorities set? Who should set them?*
- *Who do you think should be on the Information Management Committee (IMC)?*
- *The ISP team Mission visits indicate interest in the Missions for standardizing and controlling information. Should the Missions have representations on the committee?*
- *Some of our other interviews have indicated that development of cross functional systems is not possible. How have you been able to develop systems useful to several bureaus?*
- *The Financial people and Program people can't seem to get together. Why is that?*
- *[Do you think that] AID has duplicate data in ... two [or more] systems?*
- *How does AID get control of [user developed systems]?*
- *What are the proper roles for system development and maintenance?*
- *What responsibilities for data does [your office] have?*
- *Who is responsible for the protection of the data?*
- *How do you establish the organization to do ... cooperative work?*
- *How do you get systems developed for [your office]?*
- *With respect to the concept of corporate data, do you think that there is data that could be shared among AID organizations with the effect that AID could do its job better?*
- *With respect to data in your own computer systems, what are your responsibilities for the data?*
- *How can AID organize to complete a cross-functional system development?*
- *What kind of support do you expect from [the CSD]?*
- *What kind of organizational structure can bring AID/[El Salvador] users and [CSD] together on projects?*

- *What is meant by technical support?*
- *How can you insure data integrity?*
- *Is there any AID precedent to form multi-disciplinary teams to accomplish a mutual objective?*
- *What is the proper role of [CSD]?*
- *What are the responsibilities of the [CSD] verses the user?*
- *What kind of information systems are used by your bureau?*
- *What do the bureaus need to carry out their information system roles?*
- *What is [the CSD's] responsibility towards this same information?*
- *Do you have any other comments? ■*

Appendix IV:

USAID as Exemplar: A Proposal to Reduce and Eliminate AID-Generated Waste

The proposal below was sent as a memorandum on December 22, 1993, by this writer to the following USAID/El Salvador officials: Mr. Charles Costello, Director; Ms. Anne Dahlstedt, EXO Chief; Mr. Peter Gore, ANR; and Ms. Rita Dale, C&R/EXO. No response was received from any of them.

All U.S. Government employees should "*Seek to find and employ more efficient and economical ways of getting tasks accomplished*" ³¹

► **SUMMARY:** This is a proposal for the reduction of waste at USAID using the example of the El Salvador Mission. It specifically addresses paper and paper products; however, the gist of the proposal can be applied to all aspects of the agency worldwide. The proposal is ultimately asking the question: *Can AID expect the various host institutions and nationals to act in an economically and environmentally sustainable mode when AID, itself, does not?* The proposal estimates that with some elementary managerial techniques, paper waste can be mostly eliminated and reduced by up to 50%, which in turn translates into an annual savings to the U.S. Government of approximately \$14,000 per year for the USAID/El Salvador mission alone, and if applied to all USAID missions globally, \$300,000 per year would be saved for the organization worldwide. It is argued that such a policy can have ripple effects on all AID sponsored projects, therefore, spreading the financial savings. A conservation and recycling policy by USAID can also give an image of anti-waste and pro-sustainability to this development agency, one which the host institutions can emulate.

► **BACKGROUND:** Two conditions make the concept of recycling and conservation timely for USAID. One is the continuing deterioration of the global environment and AID's stated policy to combat that phenomenon. The other is the reduction and uncertainty of U.S. Government funds allocated towards foreign aid programs. A major policy objective of President Clinton's new foreign aid plan is the promotion of *sustainable development* through economic growth, population control and *environmental protection* (The Miami Herald 1993). Several USAID/El Salvador projects already address the environment. For example, the Caribbean and Latin American Scholarship Program (CLASP) and Central American Peace Scholarships (CAPS) have, as part of their goals, the sending of Salvadorans to the U.S. for the purpose of "*experiencing America*" and intensive training in "*protection of the environment*" (USAID/El Salvador 1993-d). In addition, the environmental project PROMESA ³² and the Salvadoran Environmental Strengthening project have budgets of \$20 million and \$2 million respectively.

³¹ Part of the code of ethics of the U.S. Government which USAID has pledged all its employees to abide by (USAID/Washington 1983-a).

³² PROMESA stands for *Proteccion del Medio Ambiente Salvadoreño*.

The above projects are fitting at a time when El Salvador's environment is at a crossroad. It can either be improved or continue its aggravation. As a result of years of deforestation and lack of serious environmental management, El Salvador has become the least biologically diverse country in Central America ³³. According to a 1992 study, up to 89% of rural Salvadoran households and 48% of urban households use firewood to cook ³⁴. Such manner of use of natural resources in El Salvador has resulted in the cutting of up to 98% of its original forest. The majority of what seem to be forests in El Salvador today are coffee plantations (USAID/El Salvador 1993-d).

Currently, USAID/El Salvador consumes an estimated 7,000 bundles of paper annually. That translates to a dollar value of about \$25,000 with current market rates. However, from a *systems* and *macro* point of view, the cost of copies are not just the dollar value paid to the seller. Add to that the cost of environmental degradation as a result of the paper production. Although such costs are not yet incorporated in U.S. Government accounting system, in reality the cost of paper consumption should also include the lost trees used to produce paper, and the polluting of rivers and atmosphere as a result of the paper-mill-produced wastes. "Marketplace prices", therefore, "don't always reflect the true costs of what is going on" ³⁵.

A concept which also needs to be thought about is the use of paper in a developing country such as El Salvador. The market rate for a photocopy in El Salvador runs about 1 colon, and in the U.S., 7 cents. To a lay observer, it appears that the price of a photocopy in El Salvador is only 1.65 times that of the U.S. Taking into consideration the extreme difference in per capita income between El Salvador and the United States; however, the price of photocopying in El Salvador becomes 32 times as much as that of the U.S., to an equivalent of \$2.27 per copy! ³⁶

For the above stated reasons, the real cost of paper and paper products is higher than the dollar amount which have traditionally been allocated to them. Hence the topics of waste reduction, conservation, recycling, and reuse are more vital and cost-saving than what one may presume.

► **THE PROPOSAL:** The following policies are hereby recommended to be implemented by USAID/El Salvador in order to have an efficient and sustainable operation in terms of paper-use. The general theme can be carried over to other resource areas of the Agency.

³³ USAID/El Salvador FY 89/90, Annex I: Biological Diversity, Annex II: Tropical Forests, excerpted in Tunstall et al. 1992. According to the president of *Conservation International*, El Salvador along with Haiti are "the most environmentally degraded and overpopulated countries of the Western Hemisphere" (Mittermeier).

³⁴ Juárez, M. & D. Current. 1993. *Estado Presente y Futuro de la Producción de Leña* (quoted in The World Bank 1993).

³⁵ Another example is that of gasoline. "The price you pay at the pump does not cover all the costs of your burning that gasoline, in the form of acid rain, urban smog, and especially global warming. Some economists have estimated that the price we should be paying to take care of all those concealed costs would be on the order of seven dollars or more a gallon. ... In the U.S., you're paying a price that is less than bottled water" (Myers 1992).

³⁶ According to 1990 World Bank statistics, the per capita Gross National Products for El Salvador and the United States were \$1,110 and \$21,790 respectively (The World Bank 1992). This translates into 0.0104% and 0.0003% of an average Salvadoran's and an average American's annual income per photocopy respectively. From a resource economics perspective, therefore, the amount which the average Salvadoran pays per photocopy is equivalent to \$2.27 (@ \$1 = 8.65 Colones, 1 photo copy for a Salvadoran = 1 Colon = \$0.116 = 0.0104% of a Salvadoran's annual income → such a price for a photocopy translates into 0.0104% x \$21,790 = \$2.27 in relative economics terms). That is to say, in relative economic terms, the price of photocopying is 32 times more in El Salvador than it is in the U.S.

1▷ All paper should be thoroughly used, and then sold: Because there is a market for used paper in El Salvador, under *no* circumstances should used paper be thrown out. Papers with one side white should be used as a) computer paper for draft and final printing, & b) note pads. Option b would eliminate the purchasing of note pads for the mission, translating into an annual estimated savings of \$2,000. All paper which have both sides used, should then be sent out for sale as a resource, *not* trash. It has been verified by EXO that the San Salvadoran company *Servicios Papeleros CentroAmericanos* (SEPACESA)³⁷ is willing to buy the throwaway paper at ¢ 0.20 (centavos) per pound of newspaper and ¢ 0.25 per pound of mixed paper. The current AID truck which hauls the paper waste daily from the compound would be taking boxes of sorted paper to SEPACESA for sale rather than discard.

2▷ Elimination and reduction of redundant copying: There are hundreds of copies of redundant information which are duplicated for everyone working at AID. Such publications as *Volcano View* or job announcements (for people who already have jobs) come in from one side of most people's desks and go out directly into the garbage can from the other --with only a few seconds of glancing of the information. There should be *one* bulletin board, perhaps called the *common board*, in the entire mission which has updated information that are to be known by all -- *nada mas es necesario!* If an employee would want a copy of the *Volcano View* or any other publication on the common board, they can order and pay the duplicating center for a copy. The common board can be conveniently located on the second floor close to the entrance or the elevators, where no one who works in AID would fail to see it.

3▷ New mode of mass-Memorandum circulation: All memorandum can be a) posted on the common board (described above), b) sent by E-Mail to all staff with access to terminals, or c) if it absolutely must be delivered to all on paper, a half page sheet or a quarter of a page should be used³⁸.

4▷ Use of auditrons or signing when copying: It is strange that the widely used *auditron* (or counter) system of keeping track of photocopies are not used by USAID. Usage of auditrons will greatly reduce the amount of irrelevant and personal copies, bringing a fair amount of accountability to the system. Auditrons are now widely used in private and public organizations for copy machines and laser printers. Even if a simple clip-board is attached to every copier and laser printer in order to keep track of the number of copies and their purpose, it is bound to reduce wasteful and illegal use of paper³⁹. In view of this writer, it is not the illegality of the act of copying and taking advantage of the

³⁷ SEPACESA's offices are located at Prolongación Avenida Juan Pablo II, Calle Antigua a San Antonio Abad, Bodegas Textiles San Jorge, Local No. 3, San Salvador, Tel: 26-6740. This is near USAID's warehouse. Mr. Vega is in charge of pick-ups, and Mirella de Angel can arrange for a tour of the facility.

³⁸ An example of redundant copying is a memorandum which was issued in November '93 by the office of the Director clarifying the *correct spelling of the Ambassador's name!* For such minor topics, hundreds of papers should not be wasted.

³⁹ Examples of illegal and unnecessary copying can be: ▷AID employee who is also a student brings books to work to copy. In the process of several months, several thousand of illegal copies are made by the same person! (this writer has seen this phenomenon first hand); ▷AID staff prints 20 copies of a cartoon which s/he thinks others should have a copy of. ▷Employee truly needs to copy a personal document; the only copy machines around are the free-be's. ▷Staff member needs to skim a 100 page document. Instead of borrowing it, s/he simply copies one for her/himself. Such instances of unnecessary and/or illegal copying should be prohibited.

system which is most amazing, rather the lack of *any* type of supervision and/or surveillance by office managers, C&R manager, and other managers who are supposedly running this public agency. Indeed this sort of waste would seldom happen in the private sector.

5> Double-sided copying and elimination of blank spaces: All copying should be on double sides of papers. In addition, the editing of any document can be done in a manner that would save paper. Such seemingly hefty documents as *AID Semi-Annual Reports* and *Fiscal Year Action Plans* have so far been irresponsibly printed on one sided prints with unnecessary amounts of blank spaces. Their volumes could easily be reduced to 1/3 of their current size.

6> Reduction of copy machines by a third: Currently there are more copy machines available in this mission than water fountains! There are 26 photocopier machines, translating into approximately 1 machine for every 10 AID employee. The question is: why so many copy machines? One can actually feed a family by operating one of these machines in town. That is, copy machines in El Salvador are a valuable commodity, one which AID is treating like a piece of furniture. The mission should sell (or give away) about one-third of its currently existing machines on the free market. The sale of 1/3 of the machines would make it clear to all that photocopying is not readily available for anyone anytime.

7> Functioning of the Copy Center as a quasi-self-sufficient business: Currently, when one walks into the CNR office, no one is permanently by the counter taking ones order. Reasons being that most copying -even personal ones- are done by the individual using the ubiquitous copy machines of the mission. Individuals should be required to not make any personal copies using the office copy-machines. A teller should be made available, among the existing ones at the copying center, to take orders and make copies at the rate of 1 colon per copy. This would be a major step towards curbing of copying costs, conserving of paper, and eliminating abuse of the system. In effect AID would be saying to its employees: "*Look, go ahead and make all the personal copies that you wish at the work-place, just do it at the right place* (at the copy center) *and the right time* (preferably before work, at lunch time, or after work) *and don't forget to pay the market price for it* (1 Colon per copy), *otherwise there will be repercussions*".

8> Purchasing of recycled paper for all mission use: One reason recycling has not picked up as much as it ideally should is that the cycle of *use* → *recycle* → *use* has not been fully closed; i.e., once a commodity such as paper is recycled, it must be sold in order for the endeavor to be viable from a business perspective. The right thing to do for businesses who do or do not recycle is to also buy recycled goods. USAID should look into the purchase of recycled paper even though currently its market price may be slightly higher.

9> Termination of use of paper cloths in restrooms: The practice of using paper cloths in the restrooms should be stopped. In each restroom, one electrical beam-operated hand dryer should

be installed. In the long-term they will pay for themselves.

10> Elimination of waste baskets: All *waste* baskets should be taken out of offices. What do people throw away besides paper anyway? (one waste basket per division can be kept for non-paper waste). Paper should *not* be treated as waste. AID should, therefore, have a central *recycling* place with each division having one recycling corner. All throwaways from offices would go to the recycling corner of each division. There can be bins allocated for one-side white paper, papers-to-be-sold, and organic waste (i.e., coffee paste, apple stubs, banana peels, etc.... which can be used as fertilizer by the gardeners). This method could potentially eliminate all garbage and would force every office employee to think before throwing anything away. Keeping one waste basket per desk will simply perpetuate the old wasteful system and will not help the recycling program.

11> Conservation, Reuse, & Recycling should become agency policy: Recycling is *not* a charitable act! It simply makes business sense to recycle. If it saves money for the U.S. tax payer and the U.S. Government, then it should be done; period! Therefore bringing the concept of local charities into the recycling program and giving it a voluntary nature takes away from its business necessity and logical sense. Donations to charitable organizations --important and laudable as they are-- are all together a totally different topic.

12> Environmental & Life-Cycle Analysis for every project and product: *Environmental & Life Cycle Analysis* should be done on all products purchased by USAID including paper. Life cycle analysis is the idea of finding out the environmental impact of a given product "from cradle to grave; i.e., from pre-production through production, distribution, usage, and disposal" (McLymont 1993). Such U.S. Government agencies as the Commerce department, EPA, and the FDA are already reviewing such an idea. In addition, every USAID project should be obligated to have an *environmental component*, i.e. a sort of cost-benefit analysis as to the effects of the project on the El Salvadoran environment. Although this may already be U.S. Government policy, it must be carried through seriously.

► **CONCLUSION:** If USAID, throughout its missions worldwide, cannot produce a sound waste management program for its own offices (such as the above proposal) and uphold environmentally sound practices, policies, and projects, then it might as well stop calling itself a "*leader in international environmental issues*" and labeling its projects as ones which promote "*sustainable development*" (Atwood 1993)⁴⁰. It should also do away with any development project relating to the environment. Otherwise, it would be giving to dissemblance. It would not make sense to recommend the protection of environment to others and conduct one's actions to the contrary. It is hoped that the above policy suggestions, or similar ones, will be looked upon and implemented by USAID ■

⁴⁰ *Sustainable development* is also one of the six objectives of the new foreign assistance bill entitled the *Peace, Prosperity, and Democracy Act* expected to be approved by the U.S. Congress soon (Callahan 1994).