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BUDGET AND ACCOUNTING RESOURCES SYSTEM
(BARS)

HIGH LEVEL REQUIREMENTS
(HLR)

Prepared By

BARS Project Team

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INTRODUCTION

The Budget and Accounting Resources System (BARS) program team was formed in September 1984 consisting of representatives from the Office of Finance and the Office of Data Processing. Preliminary tasks included the review of existing documentation, and, to some extent manual procedures. This document which contains the high level requirements for BARS has been prepared as a result of the review. After approval by the Office of Finance BARS Requirement Review Board it serves as the catalyst for further system definition.

The Budget and Accounting Resource System (BARS) will replace three existing systems - Financial Resources System (FRS), General Accounting System (GAS), and Budget Ranking System (BRS). BARS will be an integrated online financial management system allowing extensive control of budget formulation, budget execution and accounting processes. It will provide the essential tools that managers and financial officers require to be more effective and productive and will satisfy the statutory requirement to maintain accurate and timely financial records in accordance with established policies and procedures.

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CURRENT SYSTEMS

2.1 FINANCIAL RESOURCES SYSTEM (FRS)

The FRS which is the Agency's budgetary system became fully operational in 1973. It is the building block for financial administration in the Agency. Budget entities called projects are created in FRS and all financial activity associated with these projects are tracked from budget formulation through budget execution. FRS utilizes the GIMS II data base management system which provides for on-line input of budget formulation data. Accounting data which is used to monitor the budget execution is passed nightly from GAS. The system provides a limited on-line query capability but most critical reports are produced off-line. The off-line report production method is extremely cumbersome especially during the Agency's three principal budget exercises.

2.2 GENERAL ACCOUNTING SYSTEM (GAS)

GAS serves as the official Agency record for financial accountability. It provides the mechanism to control and monitor allotments, funds, commitments, obligations, encumbrances, expenditures and property issues. It became operational in 1976 and was originally an off-line system that was updated nightly with data that was input to a key-to-disk data entry system. In 1983 certain portions of the system were converted to the GIMS data base management system which allows users to input commitment and obligation data on-line. Although the system satisfies most of the original requirements, it is difficult to maintain or enhance. Additionally, several stand-alone systems have been developed (most notably a monetary system) to respond to known GAS deficiencies.

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2.3 BUDGET RANKING SYSTEM (BRS)

When the Federal Government adopted the Zero-Based-Budgeting (ZBB) concept the FRS was unable to accommodate a variety of budget levels. ZBB was subsequently replaced with Capabilities Program Budgeting which also required a variety of budget levels, thus, the BRS was developed in 1982 to supplement FRS in that phase of the budget process. BRS is an on-line system utilizing the facilities of the Agency's interactive system - VM/CMS. Since BRS does not interface with FRS, users are required to input some of the same data in both systems.

These systems which are maintained by Agency staff personnel, contain approximately 143,000 lines of code. Modifications have become increasingly complex and costly and in some cases do not satisfy existing and future needs.

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ORGANIZATIONAL STRUCTURE

The Agency is divided into four directorates. Each Directorate is further divided into offices, of which there are approximately sixty, which are further subdivided into divisions. Divisions are composed of branches. Beneath the branch level are projects. Projects are further broken down as to sub-object classification (SOC) which are used to define the category of expense. An example of this would be the Directorate of Administration which contains the Office of Finance. Within the Office of Finance is the Accounts Division which contains the Data Base Management Branch. The projects equate to cost centers which contain sub-object classifications for salary, travel, etc. The project/SOC is the basic building block for budget formulation and is used for collecting cost for budget execution and financial reporting. Any Agency financial system must be capable of collecting and reporting data at these hierarchical levels; Directorate, Office, Division, Branch, Project and SOC.

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OBJECTIVES

The following are the major objectives of BARS:

1. Consolidate the budget formulation, budget execution and the accounting functions into an integrated financial management information system.
2. Improve the responsiveness, efficiency and effectiveness of the Agency's budget formulation and execution processes by providing enhanced automated techniques and significantly update and improve the recording and reporting functions of the accounting system.
3. Through improved human/machine interaction reduce the human effort required to process and review financial data. One of the key areas in this objective is to provide increased capability for manipulating data and thus circumventing the need for manual report preparation.
4. Maintain sound financial control in accordance with the Government Accounting Office policy and standards except where specific exemptions have been authorized.
5. Provide technical discipline for organizationally decentralized financial transactions which would include imposing technical accounting and financial standards throughout the Agency at all levels and locations as well as providing standardized training, procedures, and staffing related to financial functions and operation of systems.
6. Use current state-of-the-art technology and techniques in all stages of system development including use of commercially available software which satisfy requirements.

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REQUIREMENTS

This section discusses the BARS high level requirements.

5.1 GENERAL REQUIREMENTS

5.1.1 Technology

The new system must employ latest state-of-the-art technologies. This includes a flexible data base management system that provides a report generation facility that can be manipulated easily by non-EDP professionals; on-line input and retrieval of data; utilization of analysis, graphics, spreadsheet and report packages to allow users to locally manipulate the data, and employment of electronic mail to eliminate the use of paper documents to the largest extent possible.

5.1.2 Flexibility

It must be flexible enough to adapt to changes both external, such as the ZBB, and internal, such as organizational changes in top level management which result in new reporting requirements as well as unanticipated day-to-day needs for data in various formats.

5.1.3 Edits

The system must possess front-end edits and validations to ensure the correctness of data being entered. These edits must display error messages on-line and require that correction be made before accepting the data. These error messages must be sufficiently self-explanatory so that reference manuals are not required to understand the nature of the error detected. Display of an error code without an accompanying definition of the error is unacceptable.

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5.1.4 Reports

It is necessary that the system be able to produce both recurring and ad-hoc reports. The recurring reports are regularly scheduled reports produced on an annual, semi-annual, monthly, weekly and daily basis. The ad-hoc reports are those produced by a user whenever the need arises. This capability will require that the user be able to extract desired segments of data and manipulate and format it in any manner needed at the time. This capability must be provided in a manner other than the rigidity of pre-formatted menus but rather through a very user friendly query language or through downloading to a micro-processor or a combination of both. Also a query capability is needed so that users may query on-line the status of any budget or accounting file. This is especially needed for certain general ledgers, such as those general ledgers pertaining to cash, advances and payables.

5.1.5 Security

A necessary consideration is that the system provide security safeguards that allow user access on an authorized basis. This requires that a user can only update and retrieve data within their spheres of activity within the data base. Additionally, spheres of activity may be broadened for higher levels within the organizational hierarchy therefore retrieval of data at these wider levels must be restricted to specified personnel.

5.1.6 Audit Trails

Audit trails must be provided so that all system activity can be traced. A transaction register must be provided on demand both in hard copy form and terminal display which will reflect pertinent data regarding the transaction e.g. date, time, user identification, etc. In addition to providing data regarding the individuals initiating a transaction, audit trails should also be provided to link back to the approving and certifying officers concerned with that transaction.

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5.1.7 Backup and Recovery

The system must provide backup and recovery features. These features must include automatic journaling and database backup and recovery utilities to protect the integrity of the data against software or hardware failures.

5.1.8 Remote Location Data Exchange

The system must allow for receipt of data from locations outside the Headquarters area with such data being able to update the system. Also at some future point in time it must also be capable of providing those locations with the ability to retrieve data from the on-line environment.

5.1.9 Interfaces

FRS and GAS are currently interfaced with two payroll systems and two Logistics systems. The new system will require similar interfaces. A Logistics Integrated Management System (LIMS) is being developed to replace the current Logistics systems. It is being designed as an on-line system to allow for the input of requisitions, processing of procurement actions, payment of vendor invoices as well as other Logistics transactions.

A new payroll system (ACIS) is being developed to replace the current payroll systems. It is planned that this system will also operate in an on-line environment.

The Agency is also developing a system for its remote installations. This system (CRAFT) will allow those installations through the use of the Agency's communications facilities the capability of interactively updating and retrieving data from Headquarters computers.

BARS must be designed to interface with these systems. In addition, it must be capable of interfacing with the State Department's Financial Management System (FMS) which is currently under development. Additionally, BARS must have an interface with the Agency personnel system - PERSIGN - to provide data for personnel costs and positions. Finally, the Agency is planning to develop a travel system to automate the process of preparing travel orders and accountings. This system must interface with BARS for the purpose of passing travel obligations, advances and expenditures to update the budget monitoring function and subsidiary ledgers.

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5.1.10 Human/Machine Interaction

The system must utilize intelligent terminals that are easily manipulated by non-EDP professionals. All input transactions should prompt the user for specific information based on the input transaction code. The user query capability must be based on a modern report generation system that can be easily manipulated by non-edp professionals. Help facilities must be available to assist with both the input and query functions.

5.1.11 System Configuration

The system must consist of both main-frame and micro-processors. The micro-processor portion shall encompass work stations consisting of micro-processors, color visual display units, printers and graphics plotters. These will be called Budget and Accounting Workstations (BAWS) which will both receive data from and provide data to the mainframe as well as local data manipulation. The BAWS must serve a dual role as CPU's for individual processing and as terminals for data input to the main frame; e.g. a budget officer may use the BAWS to manipulate downloaded data into desired trend analysis reports or may use it as an input device to update obligations to the obligation/commitment sub-function.

5.1.12 Certifications and Approvals

User profiles must be structured to allow for various levels of approval and certification in an environment of electronic approval. This will require a method of authenticating the identity of individuals which goes beyond the present use of userids and passwords. This will involve, but is not limited to, the use of card-key devices, signature verification or morphological techniques. This will further require that the scope of each individual authority - dollar limitations, project numbers, specific approvals, etc. - be included in their profile. Any approvals that are outside of these parameters would be rejected and the individual initiating the action would be notified.

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5.1.13 Budgetary Control

The system must automatically check for availability of funds against a given allotment. This same capability must also be provided to check for availability of PRA.

5.2 FUNCTIONAL SYSTEM COMPONENTS

The system will consist of four major functions: management information, budget formulation, budget execution, and accounting. These functions will be further decomposed into sub-functions. It will be necessary that these sub-functions interact so that transactions being entered be applied, as necessary, across the system. Further the system must allow for automatic closing entries on a daily, monthly, and yearly basis.

5.2.1 Management Information Function (Project)

The Management Information Function is the keystone to the BARS. It contains all of the agency's project (or cost centers) and the information pertaining to each project. This project data must be provided to other functions both within the budget sub-system and the accounting sub-system. This data is used to validate project numbers being input to the system in the other functional areas as well as providing the other functions with necessary data elements containing the allotment information or program information pertaining to the individual project. Key features are:

1. Data is input on-line by individual budget officers.
2. Contains all pertinent information for approved Agency projects.
3. Data must be edited by tables to verify accuracy of input.
4. Inputter must be identified to assure they are only inputting data for their office.
5. Allow flexibility to expand for new data elements or delete obsolete ones as the budget environment changes e.g. ZBB, CPB, etc.
6. Must include types of appropriations and tenure of funds to allow for multi-year fundings and appropriations.

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7. This function provides project data to the Office Formulation Sub-function, the Agency Formulation Sub-Function and the Accounting Function.
8. This function will provide data to external systems such as ACIS, LIMS and PERSIGN to be used for validation of project numbers within those systems.

5.2.2 Budget Formulation Function

This function is used to collect and store budget data for the purposes of formulating the various budget exercises and ranking budget packages at differing resource levels. This function consists of three sub-functions: Office Formulation Sub-Function, Agency Formulation Sub-Function, and Ranking Sub-Function. The Office Formulation Sub-Function will be used by the offices to formulate budget requirements for positions and funds at the lowest level. This data, in turn, will be summarized and passed to the Agency Formulation Sub-Function. This sub-function will be utilized at the Comptroller and Directorate level and will be used to consolidate and manipulate the budget data into the formats to be used in Agency submissions to external entities such as OMB and Congress. This sub-function will provide data to the Ranking sub-function which will consolidate the data into discrete work packages to be ranked in accordance with the capabilities programming requirements.

5.2.2.1 Office Formulation Sub-Function

This sub-function will be a microprocessor hosted system that will provide budget formulation support to the lowest budget entity (office/expenditure center). It must include the capability to transfer data to and from the mainframe hosted Agency formulation system. One of the primary advantages of this system is the decentralization of the the budget formulation output requirements that currently overburden the central system. Users at the office/expenditure center level will be able to produce the necessary outputs using a local output device. Key features of this function are

1. Data from the Management Information Function will be downloaded to the Office formulation system. This file will contain all of the management information associated with each project as created by the individual offices. The

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changes to this data will be made through the Management Information Function and downloaded to the Office formulation Sub-function

2. This sub-function will include a menu driven capability to add, change or delete seven years of cost data at the line item level. Input requirements for this menu will include the optional capability to record a line item description i.e. information below the Sub-Object Class (SOC) level that will be beneficial to support Office budget formulation requirements. The system will also include a menu driven capability to add, change, or delete position, full time equivalency, and grade information at the project/SOC level.
3. This sub-function will incorporate individual Budget and Accounting Workstations (BAWS) consisting of microprocessors, color visual display terminals, printers and graphics plotters which will operate in a stand-alone environment or be linked to the mainframe.
4. A user friendly report generation capability that will provide the capability to manipulate the data in an efficient and rapid manner. This will include the ability to formulate both ad hoc and standard reports at the BAWS and produce hard copy reports. Standard reports will include all of the required CPB forms and the programmatic reports required in the Budget Call.
5. This sub-function must provide an electronic spreadsheet environment to be utilized in developing various budget estimates in desired formats such as shown in the following two requirements.
6. This sub-function will provide the capability to spread personal services costs based on a given set of formulas. The system must provide the ability to quickly and efficiently change these formulas.
7. This sub-function must be capable of projecting out year cost estimates based on a given set of inflation factors. It must also provide the ability to quickly and efficiently change these factors.
8. This sub-function must be capable of processing textual data. This feature will provide the capability to incorporate textual data into a variety of output formats.

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9. This sub-function should include a graphics package that can be efficiently manipulated by users.
10. This sub-function must be capable of producing all budget worksheets as are currently being produced by the present system.
11. The capability to key on any of the management functions e.g. target, program, category, etc. must be available to produce budget reports in any desired format.
12. This sub-function must provide the ability to store budget and textual data on disk after each budget exercise with the ability to re-load the disk for report generation purposes, if required.
13. The system will provide the capability to summarize the data at the project/SOC level and provide this summarized data to the Agency budget formulation sub-function.

5.2.2.2 Agency Formulation Sub-Function

The Agency formulation sub-function is a main frame system that will provide direct support to the Directorates and the Comptroller during the three major budget exercises. Most of the data for this sub-function will be provided by the Office Formulation Sub-Function, however, a menu capability will be required to make changes, if required, by the Directorates and the Comptroller. This sub-function should provide the same capability to the Directorates and the Comptroller as the Office Formulation Sub-Function provides to the individual offices. The capabilities of the Agency Formulation Sub-Function should mirror the capabilities of the Office Formulation Sub-Function. The difference is that the Office Formulation Sub-Function is designed to provide support to the individual offices in preparing their budgets. The Agency Formulation Sub-Function is designed to support Directorate and Comptroller requirements. As such, the Agency Formulation Sub-function must include the following requirements many of which are also incorporated in the Office Formulation Sub-Function.

1. Data is provided from the Office Formulation Sub-Function. Changes to the data may be made on-line.
2. Provide for on-line display of Agency budget reports as well as for on-line updates. This must include a menu driven

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capability to add, change, or delete seven years of cost data as well as manipulate position and grade data.

3. Utilize word processing to be able to produce the textular budget data and combine it with numeric data. This sub-function must provide the capability to incorporate data into a variety of output formats.
4. Data from the Management Information function must be provided to this sub-function.
5. This sub-function should provide a graphics package that can be efficiently manipulated by users.
6. There must be a capability to key on any of the management functions e.g. target, program, category, etc. This must be available to produce budget reports in any desired format.
7. The system must have a user-friendly report generation capability that allows data manipulation in an efficient and rapid manner.
8. This sub-function must provide an electronic spreadsheet environment to be utilized in developing or manipulating various budget estimates.
9. This sub-function must provide the ability to store budget and textular data on each of three individual budget exercises and provide the capability to retrieve it when required.
10. Provide for the computer generation of all schedules and reports. e.g. ADP schedules, Schedules of Reimbursements and Advances, etc. as well as Agency level reports such as the 'pony blankets'.
11. This sub-function must provide the capability to download data to the BAWS for manipulation into desired formats.
12. Data developed in this sub-function should be provided to the ranking sub-function.

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5.2.2.3 Ranking Sub-Function

This sub-function will be used at the Directorate and Comptroller levels to rank budget packages in accordance with the requirements of Capabilities Program Budgeting. It must be capable of producing iterative ranking reports in a timely and efficient manner.

1. This sub-function should utilize summarized data from the Agency formulation sub-function.
2. Directorate and Agency ranking levels will be input on-line by the office of the Comptroller and Directorate budget offices.
3. Provide capability to consolidate the data from the Agency formulation sub-function into discrete work packages.
4. Allow for ranking the work packages in accordance with the capabilities and programs budgeting requirements.
5. Outputs from this function will be the rankings of the budget data at various levels.
6. The capability must be provided to rank packages at two different levels- the Directorate level and the Comptroller level.
7. This sub-function should provide capability for modelling the data through what-if scenarios.
8. This sub-function should have the capability of graphically portraying cost and benefit curves to facilitate analysis of what-if scenarios.

5.2.3 Budget Execution Function

This function contains the budget and expense data for the Agency. This includes operating budget data which represents the funding authorities as well as commitments, obligations, expenses, encumbrances and issues against these authorities. It must use data provided by the Management Information Function, in conjunction with data from the various sub-functions and external interfaces to produce trend reports. In addition, trend data must be available through on-line retrieval as well as hard copy reports produced on demand. This trend data must allow for the capability to portray

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data for commitments, obligations, expenditures, encumbrances and issues against the operating budget data at various levels including the project/SOC level, project level, target level and country level, etc. The capability must also be provided to retrieve and array this data by type of Agency allotment. This function must further provide the ability to monitor obligations against expenses in an on-line environment as well as allow for the monitoring of the status of obligations and the status of encumbrances both on-line and in hard copy output. This function must provide the capability to down-load main frame data to the BAWS for purposes of data manipulation and report generation.

5.2.3.1 Operating Budget Sub-Function

This sub-function will contain the operating budget data which represents the funding authorities. It is through data contained in this sub-function and portrayed against the data provided by the other sub-functions and interfaces that the monitoring and trend analysis of the Agency operating budget is made possible.

1. Allow for storage of Agency operating budgets by Allotment Code, project and SOC.
2. Provide the capability to differentiate between funds and PRA in the operating budget. This should consist of a method for allowing the budget officers to make on-line inputs to convert the initial funds portion of the operating budget into the desired PRA amount. This should be done at the project level.
3. Provide the capability to receive the initial operating budget from the Agency formulation function and provide on-line input for a separate field to accommodate changes. This will provide for variance analysis between planned and actual (reprogramming report).
4. Data from the obligation/commitment sub-function, encumbrance/issue sub-function, and expense sub-function must be summarized at the project/SOC level and passed to this sub-function.
5. This sub-function must provide the capability to down-load operating budget, commitment, obligation, encumbrance, issue and expense data to the BAWS where it can be manipulated and produced in any desired format including both terminal and

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hard-copy displays in tabular, textular, or graphics outputs or a combination of all three.

6. It will serve as the authority for providing the availability of funds and PRA to other systems such as LIMS and the Travel System.
7. In concert with Management Information Function this function will provide the capability to produce all trend analysis reports in hardcopy format.
8. This sub-function must receive necessary data from PERSIGN to produce average salary reports.

5.2.3.2 Obligation/Commitment Sub-Function

This sub-function will contain obligation and commitment data to be portrayed against the operating budget. It will operate in the same manner as the current ORN data base. It will receive data from the individual budget officers as well as external interfaces and will provide data to other sub-functions. Under the current system, each obligation is unique and distinct. It is identified by an Obligation Reference Number (ORN) which contains data to identify the Fiscal Year, Office, Station, and the obligation source, e.g. Travel Order Number, etc. Each individual ORN has connected with it certain data elements such as project number, SOC, description, etc. This data must be provided to other sub-functions such as the expense sub-function, accounts receivable sub-function, etc.

1. Input will be done on-line by various budget officers at the Obligation Reference Number (ORN) level. This sub-function should operate in a manner similar to the current ORN data base. It should capture a wide variety of data at the time of commitment or obligation. Such data would include project number, SOC, expenditure code, and other desired elements.
2. Data for commitments and obligations for equipment and contracts procured through the centralized procurement entity must be provided to this sub-function by the Logistics Information Management System (LIMS).
3. The management information function will be used for editing project numbers.

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4. Data being input must be edited against tables to assure integrity.
5. This sub-function must produce an exception (commitment/obligation difference report) whenever the obligation amount significantly varies from the amount of the commitment. The percentage of variance is yet to be determined.
6. This sub-function must receive payroll obligation data from ACIS.
7. This sub-function must receive obligation data from the Travel System.
8. This sub-function must receive encumbrance data from LIMS.
9. A capability must be provided to allow for automatic generation of recurring obligations. This involves a code that the user can input at the time an obligation is created. This code will direct the system to generate a similar obligation for a specified number of months.
10. There are times when obligations with differing SOC's must be linked together. The most prevalent example of this is travel where several SOC's are involved on one travel order. A mechanism must be provided for accomplishing this.
11. This sub-function in conjunction with the Expense Sub-Function and the Management Information Function must produce a report similar to the current Open Obligation Activity Report (OOAR).

5.2.3.3 Expense Sub-Function

This sub-function is used to collect expenditure data and liquidate the obligation against which the expenditure is made. Expenditure transactions must be compared at the ORN level against the obligation/commitment sub-function to extract data captured at time of commitment or obligation such as project number, SOC, expenditure code, etc. It must also partially or fully liquidate the obligation. Further, it must provide data to the operating budget sub-function as well as the appropriation sub-function. It will receive data from external interfaces such as ACIS and LIMS.

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1. Provide for input of expenditure data on-line by the budget officers and allow for it to be passed from the travel system, ACIS, LIMS, and CRAFT.
2. Provide for the on-line retrieval of expenditure data.
3. Provide capability to retrieve historical expense records.
4. This sub-function must receive issue data from LIMS.
5. Data from this sub-function must be downloaded to BAWS to provide capability for data manipulation and report formatting.

5.2.4 Accounting Function

The accounting function contains the accounting data for the Agency. This includes the total accounting structure which encompasses accounts receivable, accounts payable and various subsidiary ledgers. It also contains the monetary sub-function and the appropriation sub-function. A prime requirement for this sub-function is that it allow for ease of making adjustments. The system must possess the capability to allow adjustments and processing of transactions in one accounting period, e.g. month, fiscal year, etc. while processing transactions in the current period.

5.2.4.1 Monetary Sub-Function

This sub-function contains all detail information concerning Agency cash accounts. Access to this information will be strictly controlled so that only authorized individuals may manage and control the monetary accounts. This sub-function will require a real-time update capability to provide managers with the necessary tools to manage cash flow requirements in an efficient manner.

1. Allow for cash disbursements through the use of Automatic Teller Machines (ATM) or like devices.
2. Data will be input on-line by authorized officers and by financial customers via ATM-like devices.
3. Provide on-line capability for reconciling bank accounts.

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4. Allow for on-line update of cash disbursements through both cashier point-of-transaction terminals and ATM-like devices.
5. Provide for Travel system to establish authorization for advances to be given through ATM-like devices.
6. Limit access, updating and query to authorized individuals.
7. Provide for data to be passed to the General Ledger Sub-function.

5.2.4.2 Accounts Receivable Sub-Function (Advances)

This sub-function contains the outstanding advances. It comprises advances for cash and tickets to Agency employees as well as advances to field offices, projects, and other government agencies. It must provide an aging capability to allow for monitoring of delinquent advances.

1. Data will be input on-line by budget officers and other appropriate components.
2. Data may be passed from other systems - ACIS, CRAFT and Travel.
3. Data will be passed from the monetary function.
4. Provide a capability to update and monitor all advance accounts on-line.
5. Allow for link between word processing and advance accounts to generate dunning memos and distribute them through an electronic mail facility.
6. Allow for aging of advances and automatic generation of delinquent accounts.
7. Provide a feature that will prevent advances from being given to individuals who are currently delinquent in their accountings.
8. Provide for downloading to BAWS for account analysis.
9. Provide for data to be passed to the General Ledger Sub-Function.

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5.2.4.3 Accounts Payable Function

This sub-function represents the Agency's liability for payment to contractors and vendors for materiel received or services rendered.

1. Requirements for this sub-function are TBD.

5.2.4.4 General Ledger Sub-Function

This sub-function contains the various subsidiary ledgers which comprise the Agency's accounting structure.

1. Allow for capability to update and monitor all of the subsidiary ledgers and memorandum accounts in an on-line environment.
2. Provide for the capability to download subsidiary ledger data from the main frame to the BAWS in order to manipulate the data to produce reports in any desired format.
3. Allow for LIMS to provide data for receiving and issue of inventory and inventory cost adjustments to update various general ledgers.
4. Allow for ACIS to provide payroll data to update appropriate general ledgers.
5. Produce trial balance and balance sheet on-line or in hard copy.
6. Utilize automation to the fullest possible extent in preparing the annual financial report.
7. Provide for data to be passed from other Accounting sub-functions.

5.2.4.5 Appropriation Sub-Function

This sub-function contains the summary totals for the Agency's appropriation. It represents the U.S. Government investment which equates to the owner's equity in commercial accounting. It is increased by new appropriations or advances and reimbursements from others. It provides total appropriation accountability for two years following expiration of the appropriation. It must provide

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data to the general ledger sub-function and receive data from that sub-function as well as the obligation/ commitment sub-function and the expense sub-function.

1. Allow for data to be passed to and from the general ledger sub-function.
2. Allow for obligation/commitment sub-function to pass data to update appropriations at the time obligations are recorded.
3. Allow for expense sub-function to pass data to update appropriations at the time expenses are recorded.
4. Provide capability for on-line terminal input of funds allotment and PRA data. Such input must be limited to those offices designated by the Office Of the Comptroller.
5. Automate the year end closing procedures.
6. Provide for multi-year appropriations.
7. Utilize automation to the fullest possible extent in preparing the annual financial report.
8. Provide capability for data for commitments, obligations, encumbrances, expenses, and issues to be passed to this sub-function at the office level by fiscal year, allotment and type of expenditures.
9. Utilizing the downloading feature to BAWs, provide the capability to array the above data against the allotment data and present it in either terminal or hard copy display.
10. Provide for differentiation as to types of appropriations and the allotments pertaining to that appropriation.
11. Allow for identification of obligations and expenses with appropriate allotments e.g. general, restricted, etc.
12. Allow for passing data to the general ledger sub-function.

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5.3 INTERFACES

5.3.1 Logistics Integrated Management System (LIMS)

This system is used for requisitioning supplies and equipment as well as for requesting services. It consists of inventory and procurement functions as well as other functions vital to financial operations such as receiving and payment. It will interface with BARS for the purpose of property management.

1. Provide for the receipt of commitment, obligation, expenditure encumbrance and issue data to update appropriate BARS files.
2. Allow capability to provide LIMS with project data including authorities for property requisitioning and funding approvals.
3. This interface must produce a report similar to the current Open Encumbrance Activity Report (OEAR).
4. This system must provide Budget Officers with an on-line capability to analyze their encumbrances and issues.

5.3.2 Automated Compensation and Information System (ACIS)

This is the Agency payroll system which will be used for recording time and attendance as well as computing the salaries, benefits and withholdings for Agency employees and producing the payroll.

1. Allow for receipt of pay, benefit and withholding data and update the affected subsidiaries.
2. Generate obligations based on the payperiod expense and preprogrammed factors.
3. Based on payroll expenditures liquidate existing obligations.
4. Update other BARS sub-functions with obligation and expense data.

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5.3.3 CRAFT

The Agency system to automate field installations and ultimately provide for direct interaction between Headquarters and field.

5.3.4 PERSIGN

The Agency personnel system. It will provide BARS with information on positions and salaries.

1. Allow for receipt of personnel data to be used for monitoring average salary and positions.

5.3.5 Travel Authorization System

An Agency system to automate the travel process. It includes travel orders, advances, and travel accountings.

1. Provide for capability to receive data from travel module to update advance accounts and other affected subsidiaries.

5.3.6 Financial Management System (FMS)

A world-wide financial system being developed by the Department of State to capture all financial data at the source.

1. Provide for capability to receive data from FMS to create obligations and expenses for those individuals supported by the department.

5.4 OPERATING ENVIRONMENT

This section includes the technical requirements relating to the current Agency hardware configuration.

1. The Office of Data Processing systems operating environment consist of IBM or IBM compatible hardware (i.e. 3081K processors and 3380 disks) The central processing units (CPU) are run in a network mixture of MVS/XA and VM/SP/HPO/CMS operating systems. The work for the MVS/XA machines is scheduled by Job Entry Subsystem (JES3). Data security for the batch complex is handled by SKK's Access Control Facility

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2 (ACF2). The JES3 systems support Network Job Entry (NJE) and RSCS Networking for batch submission from VM/CMS users. Compilers supported by the complex are Assembler, PL/1, FORTRAN and COBOL.

Printed output for the central facility is handled by JES3 Output Services Facility and scheduled on Xerox 9700 Computer Printing Systems, and IBM 6670 printers. Both printers are "cut-sheet" printers. Fanfold paper, screenline paper is supported by the central facility on IBM 3211 printers, but only on request. Remote Printing facilities support a combination of HETRA 3780 high speed printers (fanfold) and IBM 6670 (cut-sheet) printers.

The standard terminal in the network is the Delta Data DD8260, a TTY-like device, that communicates asynchronously with the operating systems via Conversational Access Method (CAM) control language. The terminals are linked to the mainframes by COMTEN 3960 control units. The highest line speed supported is 9600 BAUD. Plans for the future call for an upgrade to the terminal network to 3270PC type devices, but the TTY type devices will still be supported for the foreseeable future.

The BARS must fit into the above mentioned environment.

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GLOSSARY

Advance

Advances represent cash or tickets which are given to individuals for which they must render a subsequent accounting. They may be one-time such as for travel or continuing such as revolving or petty cash funds. They represent a receivable to the Agency and must be monitored to avoid delinquency in settlement or accounting.

Allotment

An authorization from the head of an Agency, or his designee, to a subordinate to obligate and expend funds from the Agency's apportioned resources. In this Agency, allotments are issued to each Deputy Director by the Office of the Comptroller. Additions to the allotment may be issued throughout the year to accomodate reprogramming or new monies apportioned.

Apportionment

The authorization by OMB to the Director of the Agency to incur obligations and spend money out of appropriations and other funds made available to the Agency.

Appropriation

The Authorization by Congress (transmitted through OMB) to the Director of the Agency to incur obligations and make payments out of the treasury for specified purposes within a prescribed amount.

Base Level

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Includes all resources needed to operate and maintain throughout the budget year the capabilities that exist at the beginning of the fiscal year.

Budget Cycle

The budget is the Agency's formal presentation of the essential ingredients of a financial plan for the coming year. The Agency budget cycle has three distinct submissions, the Program Budget, the OMB Budget, and the Congressional Budget. Subsequent to Congressional approval and apportionment, the operating budget is established based on approved funding and used as the parameter for monitoring commitments, obligations, expenditures, encumbrances and issues during the execution stage.

Commitment

A means of earmarking funds until a legal or binding agreement is effected at which time the commitment is converted to an obligation. A request of contractual services would result in a commitment until the contract is negotiated at which time an obligation would be created to replace the commitment.

Capabilities Program Budgeting (CPB)

A method whereby Agencies request and defend their resource needs in the context of their Agency's capabilities against substantive objectives or targets. This methodology describes and displays budget requests in terms of resources requirements against various activities. It does this at three different levels - base level, ongoing initiatives and new initiatives.

Disbursement

A payment of money by cash or check for properly authorized and approved expenditures.

Encumbrance

The commitment of a requisition for property against Property Requisitioning Authority (PRA). For example, a requisition is placed

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for a typewriter which is estimated to cost \$200.00. Therefore, an encumbrance of \$200.00 is established against the office's PRA.

Expenditure

A charge incurred against an allotment, for goods and services received. They must be properly certified by an Agency Certifying officer. Expenditures reduce the available appropriation.

Fiscal Year

A one-year time period for fiscal purposes during which an appropriation is granted against which obligations and expenses may be incurred. In the Federal government, the fiscal year is 1 October - 30 September.

Funds

Used to differentiate between funds and PRA. In this context, funds represent real dollars as opposed to PRA which is requisitioning authority for which the dollars were relinquished for MPA. For budget monitoring purposes it is always necessary to keep funds and PRA as two distinct entities. (see PRA and MPA).

Issue

At the time requested property is distributed to a customer an issue is made against the encumbrance. This both clears the encumbrance and creates a cost to the customer's project.

Liquidation

Expenses liquidate obligations and issues liquidate encumbrances. Accordingly, the outstanding balance of unexpended obligations are referred to as unliquidated obligations or unliquidated balances. The outstanding balance of unfilled orders are referred to as unliquidated encumbrances. A liquidation may be full or partial and is so designated by a liquidation code.

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Materiel Procurement Allotment (MPA)

This represents a stock fund account which is made up of the total amount of PRA requested by each individual office. This allotment is then used to purchase supplies and equipment. Offices may then requisition materiel to the extent of their PRA. Materiel purchased through MPA are committed upon requisitions, obligated upon time of purchase order and expensed at time of payment. (see PRA)

New Initiatives

Requests for resources needed to enhance existing capabilities or create new ones.

Obligation

An obligation is a binding agreement on the part of the government to spend money for payrolls, travel, materiel, contracts, etc. and reserves the funds for that purpose. Amounts recorded as obligations must be supported by documentary evidence such as travel orders, purchase orders, negotiated contracts, etc.

OCAR

Open Commitment Activity Report This report reflects all commitments that have been entered into the accounting system. These are arrayed against the obligations and outstanding balances. It is used by the B&F offices to monitor the status of their open commitments.

OEAR

Open Encumbrance Activity report. A report produced from data provided by the Logistics System to the accounting system. This report reflects the detail status of open encumbrances and issues. It is used by the the B&F offices to monitor the status of their open encumbrances.

Ongoing Initiatives

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Multiyear programs, projects, and systems approved in previous years that have not yet attained full operating capability.

OOAR

Open Obligation Activity Report. This report reflects all open obligations in the accounting system and arrays them by ORN against the expenditures and unliquidated balances. It is used by the B&F offices to monitor the status of their open obligations.

Operating Budget

The actual funds allotted for the fiscal year as compared to the funds requested in the budget submission. The operating budget is monitored to the commitments, obligations and expenses. The PRA portion is monitored to the encumbrances and issues.

ORN

Obligation Reference Number. A sequential number assigned to each commitment or obligation at the time it is recorded in the accounting system. It consists of fourteen digits.

Pony Blanket

A budgetary spreadsheet used for displaying the budget in many different formats.

Property Requisitioning Authority (PRA)

This is an authorization to requisition supplies and equipment up to a predetermined amount. Each office requests a portion of its funds allotment in PRA. They, in effect, give up that portion of their budget to be used in creating a stock fund account. In return they receive PRA against which they can request supplies and equipment. Their requisitions for such materials result in encumbrances and issues against their PRA. (see MPA)

Program Call

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General guidelines and instructions, issued by the Office of the Comptroller, for the preparation and submission of a comprehensive multi-year program (the current year, budget year, program year, and four succeeding years) of major Agency activities.

Project

A budget entity used for controlling Agency personnel and dollars resources and for collecting cost data. They provide management with a method of formulating resource requirements and monitoring actual use of them. Through the use of various data elements associated with an individual project it is possible to array these requirements and their costs across a multitude of dimensions.

Project Number

A six-digit number that identifies a project. These numbers are used to record commitments, obligations, expenditures, encumbrances and issues against the various projects and thus serve as cost center numbers.

Reprogramming

The changing or shifting of resources within the approved operating budget to accommodate to new requirements or adjust for changing requirements as reflected in actual commitments and obligations.

SOC

Sub-Object Class. These are codes used to identify the categories of expenditures e.g. salaries, travel, supplies, equipment, etc. The SOC in conjunction with the project number becomes the basic building block for developing new budgets and monitoring current ones.

Sub-Allotments

The Deputy Directors sub-allot their allotments to their individual offices. This aids the Directorates in controlling their financial resources.

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Tenure of Funds

Different types of appropriations have differing time periods for funds availability. Currently all of the Agency's appropriation is on a single fiscal year basis. However, in the future, multi-year funding may be implemented with the resultant need to identify funds availability on a one, two, three or more year basis.

Trend Reports

A series of reports used for monitoring the operating budget. They display commitments, obligations, expenses, encumbrances and issues against the operating budgets in various arrays such as project/SOC, program category, etc.

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