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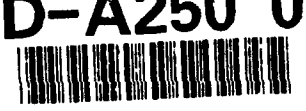

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COMMUNICATION MODULE FOR
THE MICRO-BASED SMALL PURCHASE
CONTRACTING PROGRAM

by

W. Stevenson Bowman

March, 1992

Thesis Co-Advisor: Rodney Matsushima
Thesis Co-Advisor: Kishore Sengupta

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This thesis conducted research and development of an interface between the small purchase contracting program (APADE jr.) and the Electronic Assisted Solicitation Exchange (EASE) system on COMPUSERV. The communication module will enable the small activities to use APADE jr. data and list their contracts on COMPUSERV for access by vendors to reteive details on contracts offered for bidding. The contractors may then input bid details into EASE for the communicatins module to retrieve directly into the APADE jr. databases., eliminating the typical manual document review and data entry which buyers must now perform.

The thesis performs analysis of small purchase operations and the application of autmation to small purchase activities. Different micro-based procurement programs are compared and EASE operations are analysed. Finally, the thesis proposes the design and programming of the communication interface between APADE jr and EASE. The thesis includes the code of the programs prototyping the communication module.

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the Micro-based Small Purchase
Contracting Program

by

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ABSTRACT

This thesis involves research & development of an interface between the small purchase contracting program (APADE jr.) and the Electronic Assisted Solicitation Exchange (EASE) system on COMPUSERV. The communication module enhancement of APADE jr. will enable the small purchase activities to list their contracts on COMPUSERV for access by vendors to retrieve details on contracts offered for bidding. The contractors then would input bid details into EASE for the communications module to retrieve directly into the APADE jr. databases, without the typical manual document review and data entry which buyers must now perform.

The thesis conducts an analysis of small purchase operations and examines the feasibility of automation in small purchase activities. Different micro based procurement programs are compared and EASE operations are analyzed. Finally, the thesis proposes the design and programming of the communication interface between APADE jr. and EASE.

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- Providing two working copies of RPSV2
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- Providing RPSV2 program tree structure diagram
- Thoroughly analyzing APADE jr.
- Producing APADE jr. tree structure diagrams
- Producing APADE jr. database file structure lists
- Analyzing APADE output to EASE
- Coding the program files that make up the APADE jr. communication module

Mr. Stevens performed all of this on his own time, without compensation. He worked many weekends and evenings producing publication quality printouts that make up a majority of the appendices. His coding and testing of the APADE jr. communication module programs resulted in the successful prototyping of the Output to EASE function. Without him, the research would have accomplished only a fraction of what was achieved.

I. THESIS RESEARCH

A. BACKGROUND

The Naval Supply Systems Command (NAVSUP) has implemented its Automated Procurement and Accounting Data Entry (APADE) System throughout the Navy Field Contracting System (NFCS) at Naval Regional Contracting Centers, and the Contracting departments of the Naval Supply Centers (NSCs), to provide standardized automated support of procurement efforts. APADE suffers from limitations including high cost of mainframe computer support, inaccessibility for small remote procurement facilities, extreme system complexity, and unfriendly user interface (Delaney & Skrtich, 1991, pg 1).

In reaction to these issues, two Naval Postgraduate School students based their joint thesis upon creation of a micro-computer based system to automate the procurement functions at small purchase (procurement authority less than $25,000) procurement activities (Delaney & Skrtich, A MICRO COMPUTER BASED PROCUREMENT SYSTEM: AN APPLICATION OF REVERSE ENGINEERING TECHNIQUES, March 1991). These officers created their PC based dBASE IV database program, called "APADE jr.," by reverse engineering the small purchase functions of APADE to develop an entity relationship model. From this model,

they then developed the PC based system by forward engineering using the more advanced database structure.

Now, APADE jr. is a full function, stand-alone, PC based procurement system. No documentation has yet been generated and the system has not been implemented at any site for testing. Of the follow-up work needed for APADE jr., communications capability may be one of the most significant. The analysis and development of this capability is the focus of this research.

In the latter part of the 1980s, Naval Supply Center, Jacksonville FL (NSC JAX) experimented with an electronic solicitation system for APADE. The first implementation of this project was based upon a dial-in electronic bulletin board system (BBS) running on a PC. When it became obvious that the volume of traffic required would quickly overwhelm the PC implementation, NSC JAX further evolved the system to use COMPUSERV to provide the dial-in service.

In its latest form, the Electronic Assisted Solicitation Exchange (EASE) supports four of the Naval Supply Centers:

- NSC Jacksonville, FL
- NSC San Diego, CA
- NSC Charleston, SC
- NSC Puget Sound, WA

EASE provides the most complete competition for small purchase solicitations by enabling vendors anywhere in the

world access to review solicitations and submit bids. For suitable item categories, NSC JAX and NSC San Diego have experienced measurably more competitive (lower) prices through EASE (Interview with Cathy Bodges, NSC San Diego, and Russ Brahmer, NSC JAX, 1991). In addition, the use of EASE reduced both the effort and time required to solicit, receive, and compare bids and award small purchases.

B. OBJECTIVES

The research objective is to formulate and design an enhancement to the APADE jr PC based small purchase program that will provide telecommunication capability. Primarily, this addition, the Communication Module for APADE jr., is intended to provide access to EASE for small Naval Field Contracting System (NFCS) procurement activities. These activities will then be able to benefit from the reduction of workload and time required to award certain buys that EASE offers.

C. RESEARCH QUESTIONS

The primary research question is: Can APADE jr. be enhanced to provide a telecommunication function to enable small NFCS procurement activities to access and benefit from EASE?

This research will find the functionality and flexibility of the existing EASE system using COMPUSERV and that of the

supporting infrastructure. Secondary questions that should be addressed by the research include:

- What is the best telecommunication software for integration into APADE jr.? Should it be built into APADE jr. or can "off the shelf" software fulfill the requirements?
- How can the communication module be integrated to provide the best, most automatic transfer of data?
- What is the content and format of the data that must be uploaded to and downloaded from EASE? How can that data be converted from EASE format to APADE jr format?

D. SCOPE, LIMITATIONS, AND ASSUMPTIONS

The scope of this thesis is limited to the establishment of requirements for a communication module for APADE jr. and to identify the best available software and hardware solution. From this research, a prototype of the communication module for APADE jr. will be developed to further increase the efficiency of data entry and vendor inquiry at small procurement activities. Research efforts will be limited to providing full use of EASE functions.

The intent of APADE jr. is to provide automated support to small purchase activities. These activities are those limited to $25,000 purchase authority or less. This research and the communication system developed by it are similarly limited to support of small purchase activities. The research is specifically designed to modify APADE jr., which currently has not been developed beyond a stand-alone operation. There is

no real use for the stand-alone micro based purchasing system by larger purchasing activities that require a network or mainframe application to support large numbers of buyers. It is hoped that subsequent follow-on development will lead to a networked version of APADE jr., which will be of use to larger activities and should include the communications module investigated by this thesis.

This research assumes that the direction provided by NAVSUP's Automation Development Office, specifying EASE as a Navy-wide procurement standard, is long term. Further assumptions include the need to keep the communications module flexible enough to be tailored to future changes made to formats and procedures used by EASE. With the development of a network version of APADE jr. for intermediate NFCS procurement activities, it may also become a Navy-wide standard.

E. LITERATURE REVIEW AND METHODOLOGY

I have directed my preliminary research toward the function and operation of EASE, APADE, and APADE jr. Visits to NSC Jacksonville and NSC San Diego were used to supplement the research and provide the following:

- Hands on experience with APADE and EASE
- Direct discussions with the EASE development team
- Clear understanding of small purchase procedures involving the use of telecommunication systems

- Procedural requirements for utilization of EASE
- Data formats for transfer of solicitations to EASE and bids back from it

An evaluation of relevant APADE and EASE documentation has provided many specific details necessary to the research. These documents include:

- Naval Supply Center, Jacksonville's EASE USER'S MANUAL
- Naval Supply Center, San Diego's EASE SITE PC STATION OPERATIONS manual
- Naval Supply Center, San Diego's new EASE user's presentation notes: EASE INTO TOMORROW

Subsequently, the review and analysis of communications requirements will be used to identify the best solution.

F. ORGANIZATION OF THE THESIS

The following details the chapter outline of the thesis:

1. Introduction

The chapter details the general background to the research and provides an overview of the rest of the thesis.

2. Small Purchase Activity Communication Requirements

Chapter II will review and analyze the applications for telecommunication capability within a small purchase activity. Advantages of this capability will be addressed.

3. Analysis of Micro Based Procurement Systems

Chapter III will be directed toward an analysis and review of APADE jr. and the functionality of the micro based

procurement system. Other micro-computer based procurement programs will be compared.

4. Analysis of Previous and Existing Procurement Communication Systems

Chapter IV details the EASE system, of which, access will be the primary focus of the thesis. Other possible communication systems, relevant to APADE jr., also will receive attention.

5. Analysis of PC Hardware & Software

Chapter V consists of comparisons of existing off-the-shelf or commercial software with special customized programs for the best solution to APADE jr's communication requirements. The hardware needed to implement the system will be analyzed.

6. Design of the Communication Module

In chapter VI, the design of the modification to APADE jr. will be detailed. This will include appropriate design diagrams, preliminary design specifications, and code for the module. Any modifications to the original APADE jr code will be included.

7. Conclusions and Recommendations

Chapter VII will be used to provide conclusions and recommendations developed during the research. The research questions will be answered and thesis follow-on topics will be addressed.

II. SMALL PURCHASE ACTIVITY COMMUNICATION REQUIREMENTS

A. SMALL PURCHASE PROCEDURES

Because of a general lack of automation, small purchase activities are heavily dependent upon the use of Blanket Purchase Agreements (BPAs). This procedure minimizes the number of individual purchase orders and subsequent workload to meet the vast majority of their buys. Generally, a BPA is an agreement with a vendor to provide previously specified goods without using any purchasing documentation (purchase order) at the time of order (NAVSUPINST 4200.85, pg 2-2, 1989) Under BPA rules, the authorized buyer may simply telephone the vendor, who provides the vendor's present price and availability of the requested item (NAVSUPINST 4200.85, pg 4-29, 1989). If the vendor is able and willing, the item is promptly delivered with required invoices under the agreement that the Government will pay for the item without issuing a purchase order. Of course, delivery and acceptance of the material/item is required.

Purchases valued at less than $2,500 require no competition and the buyer may simply purchase from the first vendor able to fill the requirement at a fair and reasonable price (NAVSUPINST 4200.85, pg 2-4, 1989). Purchases over $2,500 require the buyer to solicit at least three vendors and

select the vendor who quotes the best prices. In both cases, most of the work is performed over the telephone and paperwork, labor, and response time is minimized.

Those purchases that cannot be made under BPA procedures require full documentation preparation resulting in a greatly increased procurement administration time. The small procurement activity normally sends solicitations out to vendors or notification must be published with ample time allowed for adequate responses to be received. The best quotation is then selected for award, the purchase order prepared, typed, and sent to the vendor. This procedure dramatically increases the workload and the time to complete a buy.

By normal practice, the small purchase shop limits its potential bidders/suppliers solely to those in the local area for all purchases under $10,000. Such solicitations are never likely to be distributed beyond the immediate community, and even if they were, response time would make award to a distant bidder unlikely. In this manner, competition for a small purchase shop's solicitation is also limited.

B. AUTOMATED PURCHASE PROCEDURES

APADE has significantly changed the workload of the large purchasing activities by automating the production of the solicitation and purchase order documentation. During an interview with the NSC San Diego EASE supervisor, Kathleen

Boggess, in July of 1991, one notable fact revealed was that when using APADE, the paperwork generated by a BPA purchase is no less than that generated by a purchase order. APADE produces essentially the same documentation, although, for BPAs, there is no necessity to mail the forms out. APADE does not significantly distinguish between the two techniques, thus while it greatly enhances regular purchase order processing, it does no more for BPA processing. In APADE operations, BPA processing is identical until after all the paperwork has been generated, therefore the BPA does not provide the huge labor savings seen in manual operations.

The development of EASE has further eroded the advantage of the BPA. Solicitations posted on EASE most often have many bids returned by the following day without the buyer having to telephone a single vendor. The buyer can prepare several solicitations and post them to EASE on one day. The very next day the quotations can be downloaded, evaluated, and the best quotation selected for award. APADE quickly generates the purchase order and it is in the mail one day after the solicitation was first prepared. This represents a time saving of as much as several weeks in PALT and many hours in buyer telephone negotiation time.

Another significant and perhaps the most beneficial aspect of purchasing with EASE is the extent of competition available. Vendors accessing solicitations posted on EASE can be located anywhere in the world that a telephone can reach.

EASE has essentially removed all limitation upon the area in which bidders may be located, thus ensuring the best price available in the country, perhaps the world. NSC Jacksonville and NSC San Diego have experienced measurable overall price reductions in several item groups since the implementation of EASE. Small purchase shops could enjoy price competition that was never before possible without access to EASE.

Efforts to establish remote terminals accessing the regional APADE systems in the small purchase activities have been made with the intent of giving the local offices and ships, on-line input and status monitoring. This approach has worked for a very limited number of accessing sites because the increased processing burden has quickly been found to reach the level at which the system's performance is significantly degraded. An interview with CAPT. Cheney (Commanding Officer, NSC JAX), September 1991, covered these reasons it is not practical to consider remote access for most small purchase activities. Distribution of the processing may be a more promising alternative and it is the basis for APADE jr.

C. COMMUNICATION REQUIREMENTS

The needs of the small purchase activities include the transfer of data to and from their regional contracting centers (NRCC) and access to the COMPUSERV based EASE. With the typical shortage of personnel, the more automation used

for referrals and solicitation, the more efficient purchasing/contracting activities can be.

For those buys that exceed the small purchase activity's authority, the activity requires the ability to transfer data and to check status relevant to that buy, all on-line and in real time. Unfortunately, early efforts to put the small activities and ships directly on-line have resulted in unacceptable performance deterioration of the mainframe APADE systems at the regional centers. It appears that the processing capability of micro computers is advancing at a much faster rate than that of the mainframe systems used to run APADE.

The advances in both micro-computer hardware and software, with the concurrent decrease in hardware cost, have made systems available to the small purchase activities with impressive capabilities. The ability to run APADE jr. is but one benefit. This ever improving capability/price ratio will resolve the deficiency found in the efforts to support satellites to APADE.

The answer is in distributing the processing to micro-computers at the local level. The small activities could perform daily download/upload communication sessions. When done once a day in a batch operation, this would not overly burden the APADE mainframe as does on-line interactions. Referrals would be passed to the regional center's system daily, providing status data that would never be more than one

working day old. The regional centers would continue to benefit from data input provided by their customers as with interactive satellites. The small activity personnel may benefit from the participation in and the control over the process that the distributed system affords them.

The disadvantages in such a strategy are common to all distributed systems. No real-time interactive querying would be possible. Batch transfer procedures can require very strict procedures and coordination. Thus operators accessing the system from widely spread remote locations would all need to be properly trained. Maintenance and upgrade efforts would require local knowledge thus necessitating further training of many more individuals at local sites. Decentralization always leads to a lack of or lessening of control and standards become more difficult to maintain. Yet, all these difficulties can be overcome with proper planning and management.

The other area directly applicable to communication involves the solicitation of bids. If soliciting under the BPA, the buyer must make at least one telephone call and more often three. Waiting for return telephone calls may be required and the time spent conversing with potential suppliers is a large part of the job. Those purchases not covered by BPA procedures require much more work and time. The time required, for solicitation and then waiting for quotes to be mailed in, can be weeks. Document preparation

and handling also consume extensive amounts of labor, both for outgoing solicitations and incoming quotes.

The ability to post solicitations and retrieve quotes, electronically, offers the potential to save both time and effort for BPA and non-BPA buys. For the BPA buys, EASE replaces telephone calls by the simple upload of the solicitation. Turn around can be expected in one day with the bids downloaded the next day. Non-BPA buys work the same way, with the almost complete elimination of paper handling and waiting. All interested vendors have the opportunity to quote and the buyer can very quickly select the best quote for award. Bidders are no longer limited by area of solicitation and competition requirements are met to an extent that far exceeds non-automated methods. This use of telecommunication reduces both the labor and time required for each buy.

Disadvantages are limited to the requirement to use automation and maintain automated records. APADE jr. is configured to perform the record keeping and, with this effort, will be capable of providing the telecommunication services.

Further applications of telecommunication include providing input and status query access to customers (Requesting Activities). Such an application provides the customer with the ability to perform his/her own requisition data input and to obtain status on requisitions in process.

The benefits include improved customer service and reduced workload for the small purchase activity.

D. SUMMARY

At present, no standard computer system is being used by small purchase activities to automate purchasing procedures and minimize workload. APADE jr. can provide automated support similar to that enjoyed by the regional contracting centers using APADE. Further, with the enhancements to APADE jr. proposed in this thesis, the small activities also will be able to benefit from the advantages available through telecommunication access to EASE:

- Productivity gains through automated processing of solicitations and bids
- Significant increase in the distribution of solicitations and resulting levels of competition
- Lower prices due to increased levels of competition
- Reduction in procurement lead times

Chapter III will include a review of the features and capability of APADE jr. with emphasis upon the functionality of the micro based procurement system. Other micro-computer based procurement programs, now in use at different sites, will also be compared.

III. ANALYSIS OF MICRO BASED PROCUREMENT SYSTEMS

A. APADE JR.

The creators of APADE jr. chose to model their system after the small purchase functions of the mainframe APADE system (Delaney & Skrtich, 1991, pg 58). Designed to be used for buyers' daily transactions, APADE jr. was built with enhancements over the mainframe APADE system that include "..a fully automated, paper-less process where APADE requires a substantial amount of manual input and a more efficient approach to the buyer worksheet source review process" (Delaney & Skrtich, 1991, pg 59).

When a user first executes the program, he or she is prompted for a name and a password. This input is critical not only for system security and access control, but also to identify the category of the user. System functions are designed to be performed by users grouped in three categories:

- Supervisor
- Buyer
- Technician

APADE jr. is configured to display menus appropriate to the category of the user logged on. The only means of accessing a menu set for a category of user different from that logged

on is by exiting the system and logging on as a user assigned a different category. Although APADE jr. in its present form is a stand-alone system, this user-specific functionality is most valuable to a networked environment.

Supervisors are displayed a SUPERVISOR MAIN MENU from which they may choose functions that include:

- Changing a previously entered requisition number
- Working with the buyer's main menu
- Assigning requisitions to buyers
- Adding, editing, or canceling requisitions
- Processing awards and reviewing requisition number files
- Updating file records
- Creating requisition batch files for the TANDEM APADE system

Only the supervisor is able to add, delete, or edit user names, passwords, and assigned categories. The supervisor alone has access to the functions of assigning requisitions to buyers and processing awards. The system also allows the supervisor access to most functions specific to the buyers and technicians.

Buyers are displayed a BUYERS MAIN MENU from which they may choose functions that include:

- Using the buyer's worksheet and reviewing sources by vendor
- Soliciting vendors and awarding buys

- Adding or editing requisition documents
- Reinstating a suspended requisition

Buyer functions are focused upon awarding each requisition to the vendor who best meets the Government's needs. The buyers have no access to functions specific to supervisors or technicians.

The system displays Technicians a REQUISITION INPUT, EDIT, AND STATUS menu from which they may choose functions that include:

- Adding new requisitions to the system
- Editing previously entered requisitions
- Querying status of entered requisitions

Technician functions are focused upon data input into the system off hard copy requisitions from the Requesting Activity. They are able to retrieve status information concerning requisitions that may be asked for by the Requesting Activity.

APADE jr. is divided into four processes:

- Input Process
- Assign Process
- Pre-Award/Award Process
- Output Process

For Process 1, data flows include a requisition from the requesting activity, a valid requisition to Process 2, and an invalid requisition to Process 4. For Process 2, a valid requisition from Process 1, the next pr_number from the pr_number file, and a purchase request to Process 3 are the data flows. Buyer worksheet data from a variety of files, and awarded purchase requests to Process 4 are the data flows for Process 3. Process 4 data flows include invalid requisition reports from Process 1, awarded purchase request from Process 3, referral/cancellation notice to the Requesting Activity, and contract to the Providing Activity. The Systems Dataflow Diagram in Appendix A details these processes and data flows (Delaney & Skrtich, 1991, App. J).

1. Input Process

In this process, data entry personnel (technician category) manually enter initial data off the hard copy requisition submitted by the Requesting Activity. The system checks for errors and provides details of any found for the technician to edit/correct (Delaney & Skrtich, 1991, pg 61). If the error cannot be resolved immediately, the user can either cancel the requisition, if a duplicate requisition number is found, or refer it for the supervisor to work(Delaney & Skrtich, 1991, pg 61). Canceled requisitions cause a cancellation code to be sent to Process 4. This, in

turn, generates a cancellation notice and sends it to the Requesting Activity (Delaney & Skrtich, 1991, pg 61).

Similarly, a referral code is generated for each referred requisition (Delaney & Skrtich, 1991, pg 61). This code is sent to Process 4, which generates a referral memorandum and sends it to the Requesting Activity for corrective action. The system keeps referred requisitions in suspense until corrective action from the Requesting Activity allows proper completion of the input process and passing of the valid requisition to Process 2.

Technicians are the primary operators of the Input Process. The supervisor also has access to its functions and may check the technicians' performance or query requisition status. The buyers have no need to access the functions of this process.

2. Assign Process

The supervisor reviews valid requisitions that have been passed from Process 1 (Delaney & Skrtich, 1991, pg 62). Each is given a purchase request number and assigned to a specific buyer based upon buyers' workloads (Delaney & Skrtich, 1991, pg 62). The valid requisition, purchase request number, and buyer code are then passed to Process 3 (Delaney & Skrtich, 1991, pg 115).

Only the supervisor has access to the functions of this process. Supervisor validation and assignment are

necessary for work to continue each requisition. When the supervisor assigns requisitions to a buyer, the system displays the buyer's password on the screen. This provides an opportunity for security failure by compromising the buyer's password for anyone watching the screen during the process. The solution to this error would be to display the buyer's name instead (Stevens, Telephone interview with W. S. Bowman, 1992).

3. Pre-Award/Award Process

Once the requisition has been passed from Process 2 with its related purchase request number and buyer code, it is placed in a queue and priority is set by receipt date and priority code for each buyer (Delaney & Skrtich, 1991, pg 62). The buyer selects the requisition he or she will work, creating a "buyer worksheet" for that requisition (Delaney & Skrtich, 1991, pg 62). The work sheet is used as a data storage tool for all information relevant to making a buy (Delaney & Skrtich, 1991, pg 63):

- Individual data for each line item
- Sources of supply
- Point of contact data
- Responsiveness of the sources
- Quoted price for items
- Promised delivery date

The buyer uses this collection of information to select the best source to fulfill the requisition. The system annotates the source to be awarded to the contract file and the buyer appends applicable mandatory clauses (Delaney & Skrtich, 1991, pg 64). If the buyer chooses to cancel or suspend a requisition, the system generates a cancellation or a referral memorandum (Delaney & Skrtich, 1991, pg 64). Either a contract, a no-sources-available report, an ineligible price report, a cancellation memorandum, or a referral memorandum will be sent to Process 4 (Delaney & Skrtich, 1991, pg 116).

Functions of the Pre-Award/Award Process are primarily accessed by the buyers. The supervisor also has access for purposes of checking buyer performance and requisition status.

4. Output Process

The contracts of awarded requisitions must pass the supervisor's final review prior to release. The system annotates the contract with a contract number, a contract date, and a delivery date after it has been released by the supervisor's final review (Delaney & Skrtich, 1991, pg 64). The system prints all appropriate documents for each requisition based upon the contract, report, or memorandum received from Process 3 (Delaney & Skrtich, 1991, pg 65):

- Navy Standard Order for Supplies and Services (DD Form 1155) to be sent to the Providing Activity
- Abstract of the contract to be retained internally

- Cancellation notice to be sent to the Requesting Activity
- Referral notice to be sent to the Requesting Activity

While the Pre-Award/Award Process determines what actions will be performed by the Output Process, the supervisor validates and authorizes, in the Output Process, the output specified by the buyers. Only the supervisor has access to the functions of this process.

The major deficiency of the existing program in its prototype configuration is the lack of network capability. Based upon this researcher's review, it appears that APADE jr's functionality is severely limited in the present stand-alone configuration. Implementation of the system on a Local Area Network is essential for obtaining the proper benefits of its design. Its printing capability appears to be limited to the Order for Supplies or Services (DD Form 1155). Presently, APADE jr. fills in the blanks of preprinted forms that must be fed through an Epson compatible dot matrix printer. Significantly lacking is any Request For Quotation (RFQ), Standard Form 18, print capability. Standard Form 18 is the output format which is necessary for data transfer and posting of RFQs to EASE.

APADE jr lacks some of the capability offered by other systems, especially the automatic error recovery and form printing features of RPSV2. Its most notable shortcoming is the complete lack of documentation. Only after months of

research was an understanding of the system's division of labor and access control reached. At present there is no documentation detailing installation, operation, or maintenance. An operation manual or user's manual is essential to achieving the full benefits of APADE jr.

APADE jr is also lacking on screen operator instructions and assistance. There are many operations which are not properly labeled and screens which completely fail to direct the operator on how to proceed. During data input, APADE jr. prompts the user to accept or reject the data that was typed in. However, if the user chooses to reject the data, the program proceeds to add it to the database as if it were accepted by the user. Research identified another error in which the program attempts to write data to a field in the wrong database, where such a field does not exist. The format of the menus is not consistent and the entire user interface requires significant improvement to make it more user friendly. The system incorrectly allows multiple entry of requisitions with the duplicate requisition numbers.

Review of the source code by Mr. Nat Stevens of SUPSHIP San Diego revealed numerous errors in the logic and failures to follow good programming practices. Data redundancy is widespread with copies of the data loaded in multiple database files. The database files REQ.DBF and RQNWORK.DBF seem to best exemplify the data redundancy, however, there are many other database which do so to a lesser extent. Another

problem discovered by Mr. Stevens was that the programmers built recursion into their menu routines and some other parts of the system. Recursion occurs when a program calls itself and if it is done repeatedly, as in this case, it can lead to the program crashing, as often occurs in APADE jr. The many different versions of the Database File Structure, found in Appendix C, is an indicator of the convolution caused by recursion in APADE jr.

The use of filters in the program's routines significantly slows its performance and fails to read the record on which the pointer is located at the beginning of the search. This causes the program to miss some records that should be included.

It appears that the developers ran out of time to finish the system properly and rushed much of the coding. This is not unreasonable in a thesis project with a hard deadline and limited need for the program to be fully operational. The researcher's operation of the system resulted in numerous failures (program crashes) from which APADE jr. was unable to recover without restart. Perhaps many of these woes are due to the developer's time running out, resulting in the omission of proper testing and documentation.

In defense of the its developers, APADE jr. is a prototype system which they never claimed as a finished production system. The purpose of a prototype is to test ideas and develop a quick and dirty program. The prototype is used to

ensure correct development of functions and interfaces which best meet the user's needs. For such purposes, the APADE jr. prototype performs perfectly. It, as with any real prototype, must be fully developed into a reliable working system before implementation. Building a production system from a prototype is normally far more intensive and lengthy than the protoype effort. The production version of APADE jr. will require a great deal more work.

The functional layout of APADE jr. seems to make the best use of the division of labor found in a small purchase activity which does use a division of labor. It features excellent access control that removes much of the unauthorized access temptation by only displaying menus and functions that are relevant and authorized to the user logged on. It is the only one of the PC programs reviewed that is capable of handling a myriad of different merchandise receiving customers.

B. OTHER PURCHASING SYSTEMS FOR PERSONAL COMPUTERS

This research included a review of two other Personal Computer based purchasing systems in use at Naval Station San Diego. The capabilities and limitations of these systems provide a reasonable basis for comparison with APADE jr.

1. SIMA San Diego's PADPS

San Diego's Shore Intermediate Maintenance Activity (SIMA San Diego) contracted for the development of a data

processing system for its Purchasing Department. Integrated Systems Analyst, Inc. completed the Purchasing Automated Data Processing System (PADPS) late in 1989 (SIMA San Diego, 1989, pg 1).

This system was designed to fulfill the purchasing needs of the SIMA, which differ from the needs of small purchase operations that APADE jr. was designed for. Specifically, PADPS provides automated processing of open purchases for Material Request List (MRL) line items (SIMA San Diego, 1989, pg 1). It produces the MRL form or the optional DO 1307.65 Single Line Item form with which the purchases are accomplished (SIMA San Diego, 1989, pg 1). This system is designed for and installed in a LAN configuration. However, it lacks the operator-specific operations and menus that APADE jr. provides to facilitate the division of labor in a small purchase organization. Logically, SIMA designed PADPS to meet their less substantial purchasing needs. The accomplishment of a variety of purchase procedures by the same person is standard operations in this organization. PADPS provides additional password protection for some features, such as adding or editing authorized personnel. It uses specified security levels to control the functions that each user can access, but does not display special groups of menus dependent upon the category of the user.

PADPS features extensive pull-down menus and pick lists, making the Graphical User Interface (GUI) very

impressive to behold. Such an interface can make a system intuitive and easy to learn and use, but the functionality of the program also must be effective. The following discussion of the system operations is entirely based upon the PADPS Users Manual. The PADPS GUI is broken into four submenus:

- Data
- Purchase
- Reports
- Utilities

Any authorized user has access to all these submenus. System access is password protected to deny unauthorized personnel any ability to run PADPS.

a. **Data Submenu**

The Data submenu gives the user access to Add, Edit, Cancel and Delete functions. Selecting any of these functions displays an appropriate sub-submenu. All these selections give the user the ability to access database records for MRL line items, vendors, manufacturers, IDTC vendors, system users, contract types, and boilerplate contract requirements. Access to system user records is possible only if the user knows the appropriate password. The function of these selections is as follows:

- Add - adds new records to the database, details entered by the user

- Edit - modifies existing records in the database
- Cancel - cancels an MRL line item or a JCN, if there are no line items when purchase is canceled. For all others it functions exactly like Delete.
- Delete - deletes the record selected by the user. For MRL line items, it deletes erroneous entries.

b. Purchase Submenu

This submenu provides the functions for the buyer to prepare and print the buyer's worksheet. From this submenu, the user has the choice of selecting Organize, Solicit, Buy, Undo, or Renegotiate.

The Organize function gives the user the opportunity to select MRL line items desired for each purchase order. In this function the user specifies the type of purchase order to be used, the vendors to provide solicitations, and the order of the line items. A pick list of possible vendors for the contract quickly provides the alternatives needed for the buyer's worksheet.

The user chooses Solicit when ready to call the vendors and obtain bids. Each vendor's bid is entered into the system and saved on the buyer's worksheet.

The Buy function is loaded when the user is ready to choose the best vendor to award the contract to. The user first "Previews" the vendors whose bids have been entered and then selects the preferred one for the purchase order. For buys over $2,500, the system prompts the user for specific

details concerning the basis of the selection. Finally, the Buy function saves and prints out the buyer's worksheet. This worksheet could then be reviewed by the supervisor for approval prior to printing of the purchase order (DD Form 1155).

If a purchase has been completed through the Buy function and must be changed, the user selects Undo from the Purchase submenu. From a pick-list of completed buys, the user selects the requisition number of the desired purchase. The system deletes the buyer's worksheet for this purchase and returns it to a pre-purchase status. Then, the user must re-perform the Organize, Solicit, and Buy functions to develop a new buyer's worksheet.

The Renegotiate function enables the user to select a purchase that has been completed through the Buy function and returns it to the Buy function. Then the user reselects the vendor for award of the purchase order and reenters information concerning the basis of selection.

c. **Reports Submenu**

This submenu provides options for the user to prepare and print a variety of reports and purchase orders. For the purchase order print out, the user selects the desired purchase order number and orders the line items as desired. The user also selects boilerplate material to be included on the purchase order. The PADPS system then prints out the

final DD Form 1155. This function also provides the user a selection to print out monthly and semi-annual "Summary of Actions $25,000 or Less" reports.

d. Utilities Submenu

This function provides the user with the choice of changing display colors for the GUI or changing default settings. The default settings that may be edited include:

- Password for system access
- Title displayed by the GUI
- The directory (path to) containing the database files
- BPA limit
- IMP limit
- MILCON limit
- Unit Identification Code (UIC)
- Signal Code (SIG)
- DOC
- RTC
- Name of the Contracting Officer
- Name and address of the issuing activity
- Name and address of the receiving activity ("shipped to")
- Name and address to the paying activity

Finally, the user may select Reindexing to maintain database integrity. This option remedies the apparent loss of data that is often associated with dBASE III/CLIPPER database

systems. All users must be logged off and the function can take a long period of time depending upon how large the database is.

Discussion of the PADPS system, with NSC San Diego small purchase experts, revealed a variety of problems that SIMA has experienced:

- Investment of large sums of money in the contractor's effort to complete PADPS
- Frequent program and network failures that shut the system down
- Limited useful functionality
- The system is unable to print the standard forms so the printout must be done on pre-printed, blank forms
- Proprietary system that only the contractor can maintain (despite claims of generic format)
- Inconsistencies with guiding regulations

Notably missing from the documentation is any mention of backing up the databases or of removal of historical data. Despite the lack of manual reference or of demonstration for this research, such capabilities must exist or the system would quickly overfill its storage capacity and come to a halt. While, clearly this system is not as robust as APADE jr., PADPS appears to be a viable alternative for organizations operating their own purchasing divisions, in which the same personnel perform all functions associated with purchasing. It appears that this also may be a better system for implementation in a stand-alone PC configuration than

APADE jr., because it is not organized around a different functionality for different users.

2. SUPSHIP San Diego's RPSV2

Mr. Nat Stevens was an equipment specialist working on the Buy Our Spares Smart (BOSS) program at San Diego's Supervisor of Shipbuilding (SUPSHIP) Conversion and Repair when he agreed to "maintain" a contractor produced purchasing automation system. Previously, he took college courses and spent his own time to teach himself how to use a PC and then how to program in FOXBASE. His self acquired programming ability lead to the opportunity to assist the desperate SUPSHIP purchasing operation. The lack of data validation and resulting lack of data integrity in the contractor produced program crippled the purchasing organization. The old system filled in the blocks of blank standard forms, but, variances and errors in the printing of these forms resulted in the program being almost fully unproductive. A replacement for the system could not be easily found. First, no general knowledge of similar programs is available outside the commands using them. Even if it was, SIMA could not share their contractor developed PADPS with any other activity.

At this point Mr. Stevens stepped in and completely revamped the system by constructing his replacement, called Requisition Processing System Version 2 (RPSV2). He now

maintains and upgrades the system for any activity that wants to use it.

The following section is summarized from the SUPSHIP San Diego RPSV2 User's Guide (draft). RPSV2 is another typical DBASE III/CLIPPER language database program. It was written in FOXBASE and requires a copy of the FOXBASE or FOXPRO Data Base Management Software (DBMS) packages or the FOXBASE run time modules that are provided with RPSV2. RPSV2 can be run either on a stand-alone PC or on a Local Area Network.

The full DBMS package is recommended to enable the using activity to create customized application for the system. FOXPRO offers the user SQL and Query By Example (QBE) capability in a Fourth Generation Language (4GL) interface that is exceptionally user friendly. Without source code or program modification, the users could retrieve data in whatever format was desired. No custom access can be made with the run time modules. Further, Mr. Stevens is willing and able to make any modifications requested to the program itself, as long as they meet generic requirements of the majority of users.

The ability to print out all the standard purchasing forms, blank or with data entered, is an outstanding feature of this system. It requires a Hewlett Packard (HP) series II or III compatible laserjet printer and either a font cartridge or soft fonts to produce perfect forms. The system prints out

perfect forms, eliminating the need to stock preprinted forms. Even for situations where a blank form may be needed for manual data entry, RPSV2 can produce a blank copy of whichever one is required. Appendix D contains sample forms and reports printed by RPSV2.

Another significant feature of the system, which was discovered during the initial research of this thesis, is its error analysis and recovery feature. If RPSV2 is unable to function correctly, it immediately freezes its present operation, creates a file containing information detailing the system status and what caused the error, instructs the user to notify the developer, and prints out the status and error information. This information is essential for troubleshooting the failure and expediting return of the system to normal operation. Finally, the system closes all databases and shuts down to preclude any further loss or damage to the data. Correction of missing or corrupted indexes is handled completely automatically. RPSV2 reindexes the files if it finds a problem with any of the indexes.

The only shortfall in the error recovery system occurs when a user fails to exit the program before rebooting or powering down the PC. If this occurs while the program is running, it cannot properly close all the index and database files which may corrupt them. Further, when RPSV2 is run again, it may not detect the corruption unless it is obvious and significant. The solution recommended by the developer is

proper training of the system users. If they know the importance of exiting the program before shutting down, they are unlikely to cause these problems.

RPSV2 interfaces with the user through a system of light bar menus and submenus. The research determined that when run with FOXPRO rather than FOXBASE or the run time modules, menu items can be selected using a pointing device such as a mouse. Otherwise the menus function much like APADE jr. and PADPS through keyboard control. The Main Menu presents the user with the following selections:

- A. BILL PAYING MENU
- B. CIS USER MENU
- C. FILE MAINTENANCE MENU
- D. SYSTEM ADMINISTRATOR MENU
- E. UTILITY MENU
- F. DATA ENTRY - MODIFICATIONS
- G. DATA ENTRY - PIIN (CONTRACT)
- H. DATA ENTRY - REQUISITION (LINE ITEM)
- J. PRINT MENU - PERIODIC REPORTS
- K. PRINT MENU - STANDARD FORMS
- X. EXIT

a. Bill Paying Menu

This section provides functions specific to receiving activities (customers) and are not typical of a

purchase activity. The system tracks items from receipt of requisition through receipt of merchandise. Unlike APADE and APADE jr. which assume proper delivery/receipt of merchandise unless otherwise notified, RPSV2 tracks each item until receipt of merchandise is confirmed. It provides status prompting action if the merchandise is not received on time and certifies the bill for payment when it is received. Even the dollar values are tracked and updated until the payment is completed. This does make the program much more useful to receiving activities that perform some purchasing themselves. The selections included in this menu are:

- A. CERTIFY BILLS FOR PAYMENT
- B. DOCUMENT RECEIPTS
- C. UPDATE DATA ON RECEIPTS
- X. EXIT

Selection A is used to "prepare and print a PROMPT PAYMENT CERTIFICATE," NRFCWASH Form 7240 (Stevens, 1990, pg 51). Selection B documents the receipt of an item that was processed for ordering by the system. Changes to the data in the system for items received are made by choosing selection C. If no data concerning the received items is found, the user is advised and prompted to reenter the Procurement Item Identification Number (PIIN). From any submenu, selection X. always returns operation to the Main Menu.

b. CIS User Menu

Commercial Industry Service (CIS) functions are provided on this submenu. "PIIN and line item data for 'D' type contracts" may be entered once and then called up repeatedly for production of DD Form 350s. This retrieval of data provides time and labor savings when delivery orders are needed. It is also used to produce some Delivery Orders (DD Form 1155). Future modifications to RPSV2 may result in this section being renamed "Prestored Data." Selections included in this submenu are:

- A. ADD CONTRACT DATA
- B. EDIT CONTRACT DATA
- C. ADD LINE ITEMS
- D. EDIT LINE ITEMS
- E. PRINT LINE ITEMS
- F. PRINT LINE ITEM USAGE REPORT
- X. EXIT

Selection A is used to enter new contract data. Selection B performs editing of contract data previously entered into the system. To enter new line items for delivery orders made under 'D' type contracts, selection C is used, while selection D is used to edit the line items previously entered. A line item may also be deleted from selection D. Selection E prints all line items listed on a 'D' type contract, which the user selects by PIIN. Through selection

F, the system produces a Line Item Usage report for the items on the 'D' type contract selected by contract number. The user also specifies the beginning and ending dates of the period desired for the report.

c. File Maintenance Menu

Potentially one of the most dangerous set of functions in the system, File Maintenance provides access to all the data files with only one exception, the Password file. Any user may access this submenu and, through it, edit or delete any record contained in the system data files. The function is essentially identical with BROWSE in a DBMS package. None of the system checks and controls are in place when using these options. While such a function may be very handy at times, it should, at least, be limited to supervisor or system administrator access to minimize the hazard of lost data. Mr. Stevens considered this recommendation for future program modification.

From the menu, the user selects which file to work with. For each selection, the system displays a record and the choice of moving forward or back one record, deleting the record, finding another record, modifying the record, or exiting back to the menu. The desired operation is selected after the file was chosen from the File Maintenance Menu. On this menu, RPSV2 displays the following selection of files:

- A. ADDRESS FILE

- B. CIS PIIN (CONTRACT) FILE
- C. CIS REQUISITION (LINE ITEM) FILE
- D. DD 350 FILE
- E. MODIFICATIONS FILE
- F. NAVCOMPT 2276 FILE
- G. PIIN (CONTRACT) FILE
- H. RECEIPTS FILE
- J. REQUISITION FILE
- X. EXIT

d. System Administrator Menu

Access to this submenu is restricted to users assigned a high enough access level, in this case 9. The functions displayed here give the system administrator the ability to change global configuration parameters, modify authorized users, and edit default settings for all reports. The functions included in this submenu are:

- A. ALTER SYSTEM CONFIGURATION
- B. PASSWORD FILE MAINTENANCE
- C. SET REPORT DEFAULTS
- X. EXIT

Selection A enables the system administrator to specify display colors of the GUI, the date format displayed by the system, and the Unit Identification Code (UIC) of the procurement activity. Access to the password file can only be

made by selection B. This is used to add, edit, or delete authorized users and allows modification of passwords. Access to any user record is made by entering their password, so the system administrator must maintain a separate list of the user names and their passwords. This separate list could increase the possibility of compromising the system's security. Selection C is used to enter or change defaults for the print out of DD Form 350 and DD Form 1057, including the following Contracting Office details:

- Office code
- Office name
- Office address
- Office telephone number
- Contracting officer

e. Utility Menu

Utility Menu provides special database functions that should be limited to access by only the supervisor or system administrator. Its selections include the following:

- A. REINDEX
- B. PURGE DATABASE
- C. END OF FISCAL YEAR CLEAN UP
- D. END OF FISCAL YEAR BACKUP
- E. BROWSE ARCHIVED FILES
- F. CREATE AB1 STATUS

- X. EXIT

Selection A should be executed at regular intervals to maintain the integrity of the indexes and especially if data appears to be missing. The database should only be reindexed when the system is not in use and, for the LAN implementation, no users are logged on.

For recovery purposes, when a FOXBASE database record is selected for deletion by a user, the system only marks the file. It remains on the hard disk, taking up storage space until the database is purged by selection B. No recovery of deleted records is possible after purging the database. Because this routine rebuilds the indexes like selection A, it should only be run when the system is not in use and, for the LAN implementation, no users are logged on.

Selection C is used to scan the entire database for data errors and inconsistencies. If any problems are found, they are printed out so that the user can go back and add missing data, correct errors, or delete the offending record. This clean up routine is not necessarily limited only to the end of year and may be run at any time.

At the end of each fiscal year, RPSV2 can remove from the database all records of requisitions that have been ordered, received, and paid for during the previous fiscal year. Selection D may be executed only once for a fiscal year. It increases system performance by moving data for

completed purchases to an archival file and thus making the database smaller. As in selections A and B, the backup function performs a reindex and purges deleted files, so no users may be logged onto the system during the operation.

Access to the completed requisition data that has been archived is made by choosing selection E. This function prompts the user for the year of the desired archive record and then indexes the records for the year entered. Using the same functions as in the File Maintenance submenu, the user can browse through these records. However, the system is unable to produce any reports with this data.

Selection F is used to produce a data file containing requisition status in ABl format. The user may either use this file to transfer data to the ROMIS PART II system or to produce an ABl format printout. The user can even specify drive and directory for the output file. After executing this function, the user enters the beginning and ending dates of the period during which the desired requisitions were entered.

f. Data Entry - Modifications

This function is used to make changes to the requisition data and to produce a contract modification by printing a Standard Form 30. After selecting the desired PIIN, the user can change any part of the data. However, once the Standard Form 30 has been printed, there is no easy

way of correcting mistakes short of producing another contract modification. RPSV2 walks the user through the modification process with numerous prompts, but it would be unwise to execute this process unless completely prepared.

g. Data Entry - PIIN (Contract)

This selection is used to add, edit, or delete a Procurement Item Identification Number (PIIN) record. The program handles a variety of PIIN types including:

- Blanket Purchase Agreement (BPA) contract
- Indefinite delivery contract
- Basic ordering agreement
- Purchase order
- Request For Quotation (RFQ)
- Imprest fund
- Delivery order (F order)

After selecting DATA ENTRY - PIIN (CONTRACT) from the Main menu, the program prompts the user for the desired PIIN. If the PIIN does not exist in the database, the system offers the user the opportunity to add it and all related data. If it is already in the system, the RPSV2 will not allow a duplicate PIIN, and the user is offered the option of editing, deleting, converting, or adding a Line Of Accounting (LOA). A maximum of 9 LOAs can be added to each PIIN. Users assigned access level of at least 7 can add a new PIIN using pre-stored data

that was entered from the CIS User Menu. The user has the ability to change any data field during this process. Using the CONVERT option, the user can change a 'Q' type PIIN (RFQ) to any other type. The DELETE option accepts the user specified PIIN and the prompts for the LOA desired to be deleted.

h. Data Entry - Requisition (Line Item)

Used solely for adding, editing, or deleting requisition records, like the preceding data entry selections this one does not display a submenu. This function must be used to add requisitions before making a modification requiring the addition. Related PIIN records and requisition records can be entered in any order without affect, however every requisition must have a corresponding PIIN, call, and LOAs. The system will not allow entry of a duplicate requisition number.

As in the manner of the DATA ENTRY - MODIFICATIONS function, selection F from the Main Menu, this function allows users, assigned access level of at least 7, to use pre-stored data that was entered through the CIS User Menu. Instead of blank data fields, the entry screens will display the pre-stored data associated with the CLIN specified and that the user can accept or modify.

With new requisitions, the user has the option of choosing CARRY & ADD to speed up data entry for multiple

requisitions. This feature prompts the user for the number of the requisition from which the data is desired and the new requisition number to which the data will be copied. By adding a suffix to an existing requisition, the user can use this feature to copy data without creating a new requisition.

i. Print Menu - Periodic Reports

To print recurring reports, the user selects this submenu. The system then displays a menu featuring reports that include:

- A. ADDRESS LIST (ABBREVIATED)
- B. ADDRESS LIST (FULL)
- C. BOSS QUARTERLY REPORT
- D. COST CODE REPORT
- E. MATERIAL STATUS - INVOICE BUT NO MATERIAL
- F. MATERIAL STATUS - MATERIAL BUT NO INVOICE
- G. MATERIAL STATUS - ALL REQUISITIONS PAST EDD
- H. MATERIAL STATUS - USER SUPPLIED PERIOD
- J. RENEWABLE ITEMS - ALL ITEMS THAT ARE RENEWABLE
- K. SERVICE ITEMS - ALL SERVICE ITEMS
- L. STATUS OF ADP/NON-ADP REQUISITIONS
- M. UNPRICED ORDER REVIEW
- X. EXIT

Selection A prints, either in activity order or in access code order, an address listing that includes the access

codes and activities only. Selection B prints an address listing with the complete activity addresses, in either activity or access code order. The BOSS QUARTERLY REPORT prints a quarterly Buy Our Spares Smart (BOSS) summary. This selection is planned to be removed in the next modification. Selection D prints a report which breaks down items purchased by cost code. The user specifies the beginning and ending date for the desired period of the report and can limit the print out to ADP items only. The user executes selection E to print out a list of material that has not been received although an invoice for it has been received. Selection F prints out a list of material that has been received but for which an invoice has not been received. The user prints a list of material on order and not received by its Estimated Delivery Date (EDD) by executing selection G. For a report of requisitions whose EDD falls within a specified time period, the user chooses selection H and specifies the beginning and ending dates of the desired period. Selection J prints a list of renewable items during a period specified by the user. Selection K prints a list of service item requisitions for a period specified by the user. The user chooses selection L to print a list of either ADP equipment or non-ADP equipment for requisitions entered during a user specified period. The unpriced orders printed by selection M are taken from PIIN records that are designated as NOT TO EXCEED. These items are

limited to those entered during a period specified by the user. RPSV2 sample reports may be found in Appendix D.

j. Print Menu - Standard Forms

This menu enables the user to print all the standard forms with one exception. The Standard Form 30 can only be printed from the Data Entry - Modifications submenu. Functions included on this submenu include:

- A. PRINT DD FORM 350
- B. PRINT DD FORM 1057
- C. PRINT DD FORM 1155
- D. PRINT SF 18
- E. PRINT NAVSUP FORM 1321
- F. PRINT NAVSUP FORM 1328
- G. PRINT NAVCOMPT FORM 2276
- H. BLANK FORM PRINT MENU
- X. EXIT

Printing a DD Form 350 requires the user to enter the PIIN, and, if applicable, the CALL and MOD numbers of the desired requisition. If the PIIN is on record, the system prompts the user to select what type of report is desired: Original, Canceling, or Correcting. Original reports and Canceling report include all data fields. A Correcting report prints only those fields which are corrected.

Selection B prints out a DD Form 1057, Monthly Contracting Summary of Actions $25,000 or Less. The user specifies the start and ending dates for the desired period of the report. If the system finds any data errors, it notifies the user, displays specific details about the errors, and aborts the print process. Otherwise it displays all the data to print on the DD Form 1057 and gives the user the opportunity to verify and edit it. This function specifically incorporates all the checks used by NAVSUP to verify and validate the reports submitted. Thus, errors are identified and corrected before the report is ever printed, and, when it is printed, the report is guaranteed to be accepted at NAVSUP.

Printing of a DD Form 1155 is initiated by choosing selection C. The system prompts the user for the desired PIIN and call and checks for presence of it in the database. If no match is found, the user can re-enter the PIIN. If it is found, the system displays LOA statistics for the desired PIIN and allows the user to abort the print process and return to edit the data. If the user is satisfied, the system prompts for entry of data required on the DD Form 1155 and prints the completed form.

The user prints a Standard Form 18, RFQ, by executing selection D. The user specifies desired PIIN, and approves the displayed summary for RFQ statistics to continue. The user can direct the system to print some blank Continuation Pages for manual addition of "lengthy

description, drawings, schematic diagrams, or specifications tnat exceed the amount of space available for nomenclature in the requisition file" (Stevens, 1990, pg 277). The system is also capable of printing an employee list requirement page.

Selection E prints a NAVSUP Form 1321 for Y type (imprest fund) PIINs only. The system prompts the user for the desired PIIN and call and then displays PIIN statistics for the user's review. If satisfied, the user specifies the desired performance period, if applicable, and RPSV2 prints the form.

The BPA Call Review Report, NAVSUP Form 1328, is printed by selection F. An address file entry and UIC for the activities whose BPAs are used is necessary from A type PIINs. The user enters the start and ending date for the desired report period. The system prints a form for each A type PIIN it has on record for the desired period.

Selection G prints NAVCOMPT Form 2276. This form includes CIS work line items that are negotiated by Naval Regional Contracting Center (NRCC) San Diego for SUPSHIP.

Choosing selection H displays the Blank Form Print Menu. This submenu provides the user with the function of printing blank forms of whatever type is desired. Samples of the blank forms printed by RPSV2 may be found in Appendix D. Blank forms available for printing from this submenu and selections include:

- A. DD FORM 350
- B. DD FORM 1057
- C. DD FORM 1155
- D. NAVCOMPT FORM 2275
- E. NAVCOMPT FORM 2276
- F. NAVSUP FORM 1321
- G. NAVSUP FORM 1328
- H. NRFCWASH FORM 7240
- J. STANDARD FORM 18
- K. STANDARD FORM 30
- L. STANDARD FORM 36
- M. CLAUSES FOR PURCHASE ORDERS
- N. CLAUSES FOR SOLICITATIONS
- X. EXIT

The detail and functionality of RPSV2 is impressive. It is documented by a 283 page user's guide that steps the user through every function and carefully details operations that can lead to trouble. Perhaps the most serious disadvantage is the relative lack of access security to sensitive functional areas that should be reserved for supervisors. However, it should be noted that such security protection may already be provided by the NETwork Operating System (NETOS) on which RPSV2 runs.

It does not presently create or use a buyer's worksheet. This is another possible modification for future releases.

Another limitation in RPSV2 is the maximum size of a description is 6 lines of 40 characters. This can be overcome by using a continuation sheet and, as with most of the programs problems, a fix is planned for future releases. Finally, there is no way to reprint a modification short of creating another one and printing it.

While it includes many functions that are excessive for the small purchase activity, this program may be the best overall for procurement operations that do not divide their operations among different personnel. It is especially well suited for purchase operations of less than ten personnel which order, receive, and certify purchases for payment. Such an operation has no division of labor and the purchasing agents perform all operations except for signatures provided by the supervisor. Significant to EASE access is RPSV2's SF 18 print function which makes it easily integrated for RFQ data transfer. It is a proven, full function, procurement automation system.

C. SUMMARY

None of the three PC programs reviewed perfectly meet all requirements of every activity performing small purchase functions. Each is specifically tailored to specific operational requirements of the activity for which they were designed. Of the three, RPSV2 is, by far, the most robust and capable system. Both PADPS and APADE jr suffer from

deficiencies in functional capability and reliability. Significant to this research is Standard Form 18 printing capability, which presently exists only in RPSV2. The printer output of RFQs for the Standard Form 18 is essential for communication with EASE.

Chapter IV will include a review of the features and capability of the Electronic Assisted Solicitation Exchange (EASE). The data transfer and conversion issues necessary for communication between APADE jr. or RPSV2 and EASE will be emphasized. Other communication systems applicable to APADE jr. will also be compared.

IV. ANALYSIS OF PROCUREMENT COMMUNICATION SYSTEMS

A. MICRO BASED BULLETIN BOARD SYSTEM

The earliest attempt at providing data communication between the Navy Field Contracting System (NFCS) and vendors was established as a Bulletin Board System (BBS). This system was based upon IBM Personal Computer (PC) compatible hardware with dial-up access via MODEM. Naval Supply Center, Jacksonville FL (NSC JAX) first established a BBS in 1986 to provide support to its growing body of PC dependent employees.

In 1988, Mr. Russ Brahmer configured a BBS designed to give the small purchase buyers at NSC JAX a way of automating the posting of solicitations and retrieving bids. Built upon existing experience with the PC based system, he selected IBM PC compatible hardware. The software, PC Board, was also carried over from previous experience. The advantages of automated bidding proved to be very popular. This PC based system was quickly overwhelmed by the number of accessing users and the volume of data required. While NSC JAX was forced to seek alternative implementations, the PC based BBS approach is appropriate for use by a small or isolated small purchase activity.

The following includes a summary of details provided by the PC Board Operation Manual, 1988. PC Board is sold by

Clark Development Company, Inc., of Murray, Utah. The system requires a dedicated IBM PC compatible computer with at least one modem and one telephone line. With the necessary hardware, the program easily handles multiple telephone lines. Features that make this program a useful interface for procurement include:

- Global system security and password access control
- Multilingual operation capability
- Electronic mail (E Mail) and conferencing
- Script questionnaire support
- BBS subscription function
- Support of a wide range of MODEM speeds
- Color graphic displays
- Support of a large variety of transfer protocols
- Automated management of E Mail database
- User friendly interface
- Timed functions
- File scanning by date, text search, and other criteria
- Intelligent screen pauses for novice users
- Security level protection for multiple menus and conferences
- Automatic notification of bulletin update
- Ability to view compressed files
- Single user file
- Password protected "doors" to operate any designated application program

- Full network support

Other standard telecommunication software also provide automatic dial in capability. These systems lack many of the important features listed above, but are much easier to install and maintain. Crosstalk, HyperACCESS, and ProComm are typical of this type of off-the-shelf telecommunication software. They are not robust enough to support more than the smallest and simplest BBS and are not recommended for use as a procurement BBS application because their security features may not be sufficient.

Data transfer rates of even the best asynchronous telecommunication are exponentially slower than that of any PC. Therefore, a BBS is ideally run on a slow 4.77 Mhz IBM PC XT compatible microcomputer that is no longer fast enough for most applications. Since this type of machine is outdated for running the much more demanding modern applications, they are readily available for reutilization. For little, or no investment at all, a small purchase organization should be able to acquire more than enough such "dinosaurs" for primary, backup, and spare part use. The investment in PC Board is only a few hundred dollars and the phone lines dedicated to the BBS will quickly repay their cost. One employee, with reasonable computer skills, can typically manage such a system, dedicating less than full time effort.

A BBS offers the small purchase organization a very cost effective means of automating communication, solicitation, and bidding. Its major disadvantage is the limit to system growth. If the business traffic becomes too great, bottlenecks can develop in the limited number of phone lines, the amount of time needed to upload solicitations and download bids, and in the amount of disk storage. A small shop may never experience such problems. If, as in NSC JAX, the system demand exceeds the PC/BBS capability, alternatives must be pursued.

B. EASE

NSC JAX found itself with a system whose utilization surpassed initial expectations. The volume of traffic and data overwhelmed the PC/BBS implementation with only a fraction of the total solicitations or Requests For Quotation (RFQs) posted and vendors bidding on it. The inspirational breakthrough solution was found in contracting for the service. The vendor offering service with precisely the capability needed was found in COMPUSERV.

COMPUSERV Inc. featured an existing Government contract at the time the new version of EASE was begun, significantly reducing implementation time (Ullrich, 1990, pg 5). COMPUSERV is a subscription electronic communication service that provides capabilities similar to any BBS but on an exponentially larger scale. It and other services provide

communication and data exchange networks for customers worldwide. In support of EASE, COMPUSERV provides key features that include:

- Toll free or local telephone access
- Communication software run on customer's microcomputer to interface with COMPUSERV
- Hardware and software resources to maintain, manage, and access the EASE database
- E mail system for communication between the small purchase activity and the vendors
- Other COMPUSERV services as desired by the customer

EASE requires the operation of four separate software suites. The first is the APADE procurement system that provides RFQs contained in the printer output file, RFQ.TXT. The second suite is the RFQ subsystem (Purchase Site System) which converts the APADE print file for upload. The third is a telecommunication package provided by COMPUSERV, named PC3. For the purchase site, it dials, links with, and transfers the RFQ data up to and the quote data down from COMPUSERV. For the user (vendor), PC3 dials, links with, and transfers the RFQ data down from and the quote data up to COMPUSERV. PC3 also provides E mail access for both. The fourth suite is the Response subsystem, which downloads vendor's responses from COMPUSERV, prepares, and uploads the reformatted responses to APADE.

1. RFQ Subsystem

To make the system work, EASE must get the Request For Quotation (RFQ), the solicitation, and data from APADE. The Fleet Material System Support Office (FMSSO) supports and maintains the mainframe APADE system. It has not been able to provide resources to develop a special built-in interface between APADE and EASE. This forced the EASE developers to create their own interface using existing features of APADE. Luckily, APADE generates printer output in standard ASCII text format that can be easily read and converted for microcomputer use (Ullrich, pg 4, 1990). The EASE interface ". . . . intercepts the RFQ print stream and downloads it to a personal computer." (Ullrich, pg 4, 1990). This module of EASE, the "RFQ sub-system," converts the APADE print stream, in the form of an ASCII text file named RFQ.TXT and formats it for upload to COMPUSERV. A sample print out of an RFQ.TXT file from APADE may be found in Appendix E.

The following sections summarize, from NSC San Diego's EASE Purchase Site PC Station Operations Manual (draft), details of EASE operation at the small purchase activity. The RFQ subsystem is organized into six submenus that include:

- RFQ PROCESS - CATEGORY 1
- EASE USERS - CATEGORY 2
- QUOTE PROCESS - CATEGORY 3
- OPERATOR LOG - CATEGORY 4

- FILE MAINTENANCE - CATEGORY 5
- EXIT - CATEGORY 6

Before any of these functions of the RFQ Subsystem are run, APADE must have transferred the RFQ.TXT file to the microcomputer on which the EASE Purchase Site operations are performed.

a. RFQ Process - Category 1

This function takes the RFQ.TXT file generated by the RFQ subsystem and processes it in preparation for upload. Finally, it transmits the RFQs to COMPUSERV. GET NEW RFQ TANDEM FILE (Option 1) overwrites the existing RFQ.TXT data with data from the newest file.

FIX NEW RFQ TANDEM FILE (Option 2) performs screening of the RFQs. It disallows those that are not designated for EASE processing, those with Federal Supply Group (FSG) outside the 01 to 99 range, and any duplicates. Finally, it monitors and displays the total number of RFQs that were downloaded from TANDEM. This represents the total number to be uploaded to COMPUSERV for management of the posting.

PUT OUT NEW EASE RFQ FILES (Option 3) prepares the RFQs for upload to COMPUSERV by producing a text file and a data file for each one. Each pair of files is then compressed into a single archive file using the PKZIP file compression utility. Filenames for an example RFQ would be S00000.TXT,

S00000.QOD, and S00000.ZIP. In this case the prefixed initial indicates the originating purchase office, J for Jacksonville and S for San Diego. The numeric segment is sequential and unique for each RFQ. The text file has an extension of TXT, the data file an extension of QOD, and the archive (zipped) file an extension of ZIP. The RFQ archive files are all archived together with two summary files to produce a file named LOAD.ARC that will be uploaded to COMPUSERV using the PC3 software.

b. EASE Users - Category 2

The small purchase activity uses this set of functions to process and maintain vendors signed up for access to EASE. PROCESS NEW APPLICATIONS (Option 1) updates the vendor database with new application data. This data comes from the file APPLTR.TXT that is downloaded from COMPUSERV using the PC3 software. Selecting PRINT ALL USER FILE REPORT (Option 2) prints a report of all the vendors on record. The UPDATE-CONFIRM USER RECORD (Option 3) selection provides manual access to updates the vendor database. It also indicates if confirmation is appropriate. The EASE manager prints a report of vendors (users) that have not been confirmed by selecting PRINT NOT CONFIRMED REPORT (Option 4). PRINT ONLY CONFIRMED REPORT (Option 5) prints records of those vendors who are confirmed users. If the EASE manager wishes to browse the record of a specific vendor, the selection is

INQUIRE USER RECORD (Option 6). New EASE applicants receive confirmation letters that provide each vendor with the CAGE code, Infolplex code for electronic mail, and Signature code that they must have to use the system. Selection PRINT LETTERS TO NEW USERS (Option 7) generates these letters for mailing. The final selection, ASSIGN PASSWORD/VALID CODE (Option 8) enables the EASE manager to assign the codes to each vendor's record.

c. Quote Process - Category 3

The functions in this category deal with the vendors' responses to the RFQs posted previously after the quote responses are downloaded from COMPUSERV using the PC3 software. Prior to running functions in this category, the EASE Administrator site, presently NSC JAX, must process all the quotes. It obtains all quotes and routes them for each of the EASE Purchase sites. This process entails separating the quotes by Activity code and placing them in the appropriate quote file, eg. JQUOTES for NSC JAX or SQUOTES for NSC SD.

The first selection is PROCESS D/L QUOTES (Option 1). It updates the RESPCAGE file after download of the activity's quote file.

PREPARE APADE INPUT (Option 2) provides input of bar code and text data of RFQ responses to APADE. This data produces an invalid quote report and quotes for specified RFQs.

The EASE manager selects QUERY SPECIFIC QUOTE (Option 3) to browse RFQ data. The CAGE codes of vendors that have responded to date or the quote received data for a specific CAGE code may be displayed.

COMPLETION REPORT (Option 4) produces a report of RFQs closing on a specific date. It provides summaries of ". . . the average number of responses per RFQ quote response as well as the percentage of RFQs that received quotes." (NSC San Diego, pg 5, 1991). It also indicates the CAGE codes of vendors that uploaded RFQ responses. The EASE manager chooses whether to generate the report in printed hard copy or as a file for distribution to buyers via electronic mail.

To produce the Remarks report of RFQs that close on a specific date, the buyers select REMARKS REPORT (Option 5).

The ANALYSIS REPORT (Option 6) produces statistical data reports used ". . . to analyze RFQ/Vendor quote effectiveness for a specified month or portion thereof." (NSC San Diego, pg 5, 1991).

The O/S ON COMPUSERV REPORT (Option 7) selection prints a report of RFQs whose due date has not passed. These RFQs should still be available for vendor download and bidding.

d. Operator Log - Category 4

The first of two selections in this category is VIEW/PRINT THE OPERATOR LOG (Option 1). It displays or prints

the operator log beginning at a specified date. The second option, PURGE THE OPERATOR LOG (Option 2) clears the contents of the log. This selection is password protected.

e. File Maintenance - Category 5

The only selection in this category is PURGE MASTER FILES (Option 1). It is password protected and used to clear RFQs and the responses in the associated quote files for the month selected by the EASE manager. The system allows deletion of only records whose due date falls within the selected month. It will not delete records whose due date falls in the present month nor the one before.

f. Exit - Category 6

The only selection in this category, EXIT (Option 1) exits the system and returns to the operating system.

g. Procedure for Outgoing RFQs

When the EASE manager is ready to prepare outgoing RFQs, the following procedures apply. First, the system date and time must be current. The operator then downloads the RFQs from APADE into the PC file RFQ.TXT.

The operator must check and prepare the RFQ.TXT file prior to operating the RFQ subsystem. First, the date and time that RFQ.TXT was created is checked to ensure that they reflect the date and time that the RFQs were downloaded from APADE. Next, the operator browses the contents of RFQ.TXT to ensure it is complete. The end of file character

(→) at the end of the file is a good indicator that it is complete. If this character is missing, the download must be repeated. To make a backup of the data, the operator copies RFQ.TXT to a floppy diskette. Finally, the operator copies RFQ.TXT to the \EASEPROG subdirectory on the PC and reconfirms the time and date to ensure that the correct version of the file is present.

At this point, the EASE RFQ subsystem is ready to process RFQ.TXT. The operator loads EASEMENU and selects RFQ PROCESS - CATEGORY 1. The operator executes GET NEW RFQ TANDEM FILE (Option 1) from the submenu. The next selection from this submenu is FIX NEW RFQ TANDEM FILE (Option 2) and then the operator selects PUT OUT NEW EASE RFQ FILES (Option 3). These steps lead to the creation of the LOAD.ARC compressed file of RFQs that will be transferred to COMPUSERV. Subsequent operation requires the use of the COMPUSERV PC3 program, described below. At this point the operator must exit from EASEMENU.

2. Telecommunication Subsystem

This section summarizes the purchase site operation of the Telecommunication subsystem from details provided by NSC San Diego's Purchase Site PC Station Operations manual (Draft) and Naval Supply Center San Diego Presents EASE Into Tomorrow. This subsystem incorporates COMPUSERV's PC3 software on a PC at the purchase site and on a PC at every participating vendor

(user) (Ullrich, pg 5, 1990). COMPUSERV customized PC3 specifically for EASE access and the purchase site and vendor versions differ accordingly.

At the purchase site, PC3 provides functions to upload RFQs to and download vendor's responses to RFQs from COMPUSERV. The EASE SYStem OPerator (SYSOP) also uses it to access E-mail and conference features to communicate with vendors. PC3 makes the telecommunication process appear invisible to the user as it handles all telecommunication details including:

- Dialing COMPUSERV's telephone number
- Connecting with COMPUSERV
- Matching protocols and BAUD rates
- Transfer of data to and from COMPUSERV

a. *Outgoing RFQ Procedures*

After completion of the outgoing RFQ procedures of EASEMENU, the operator checks for the presence of and the correct time and date of LOAD.ARC. Then, the operator executes PC3 and selects Option 9 - SYSOP FUNCTIONS from the menu. From the NSC EASE SYSOP menu, the operator selects UPLOAD NEW RFQs, directing PC3 to dial, logon, and setup COMPUSERV for receipt of new RFQs. COMPUSERV automatically uncompresses LOAD.ARC and displays each RFQ for the operator to monitor as they are removed from the archive. Then

COMPUSERV automatically updates the database index files using the RFQ.DMI and SUMMARY.DMI files that were compressed in LOAD .ARC along with the RFQs. A display of summary details for the upload allows the operator to check for apparent errors in the upload. These summary details include:

- Total number of RFQs
- Number of different business categories
- Number of different release dates
- Number of different closing dates
- Number of different regions
- Number of different activities
- Number of different files/records

After assuring the summary details match the upload statistics, the operator completes the check of the uploaded RFQs by downloading a sample of them. This requires returning to the Main menu and selecting Option 1 - DOWNLOAD RFQs. As before, PC3 dials, connects, and logs onto COMPUSERV. COMPUSERV prompts for and the operator enters the FSG codes, the desired release date, and appropriate region(s) of the RFQs desired for download. PC3 will query the database using this criteria and display the total number of RFQs that have been selected. The operator can choose to exit, conduct a new search, modify the present search, or download the RFQs identified by the present search. Selecting download

transfers copies of the vendors' bids for processing by EASE's EQUOTE program.

EQUOTE is executed in the same manner as it will be used by the vendors when they browse the RFQs. The operator selects Option 1 to view the downloaded RFQ files and ensure that they are complete and accurate. If all is well, no further action is required. If the RFQs are damaged or incomplete, the preparation and upload procedures must be repeated.

There seems to be an extraordinary amount of manual error checking and correction involved. This is understandable as the system is still in the development stages. For more mature versions of EASE, my conclusions will include recommendations that automation be developed to perform this error checking and, when necessary, control the repeat preparation and loading. A good automated system should minimize manual intervention that can overlook errors and wastes valuable man hours.

b. *Incoming RFQ Responses*

Several initial steps in downloading RFQ responses from the vendors are performed solely at the EASE Administrator site, NSC JAX. The first of these steps is the download of the archive files, each containing the individual bid from a vendor. These files are stored in COMPUSERV mailboxes so that when downloaded, appropriate confirmation

messages will be sent to the vendors. The EASE Administrator at NSC JAX reviews each response and compresses those for NSC JAX into an archive file named JQUOTES.ZIP and those for NSC San Diego into an archive file named SQUOTES.ZIP. Other participating purchase sites would have their own specially named and compressed quote file.

Vendor responses (quotes) that contain no quote data are written to a file named BADQUOTE.TXT that identifies the vendor who sent it. The erroneous quotes may then be referred back to the originating vendor.

Immediately after all the quotes have been reviewed and compressed, the file SQUOTES.ZIP is uploaded to COMPUSERV and provided to the NSC San Diego EASE SYSOP via COMPUSERV E-mail. The purchase site, in this case NSC San Diego, executes PC3 and chooses the E mail function to locate and download the compressed quote file, in this case SQUOTES.ZIP. Once the xQUOTES.ZIP file is copied onto the PC, the operator is finished with PC3 and ready to return to EASEMENU to execute the Response subsystem.

3. **Vendor Subsystem**

The software used by the vendors to participate in EASE includes COMPUSERV's PC3 telecommunication program and NSC JAX's EQUOTE program. The NSC San Diego vendor's guide to EASE summarizes the vendor's basic steps in using EASE as follows:

- Run PC3 and log onto COMPUSERV
- Download RFQs of interest
- Log off COMPUSERV and exit PC3
- Run EQUOTE
- View or print downloaded RFQs
- Prepare responses (bids) to RFQs
- Prepare responses for transmission
- Exit EQUOTE
- Run PC3 and log onto COMPUSERV
- Upload/transmit response file
- Exit PC3 and done

The key to the system's success is in keeping the operation as simple as possible. Another important criteria is the vendor's cost to set up and use EASE. NSC San Diego estimates the vendor's costs to be limited as detailed in the following table.

TABLE 4.1

CONTRACTOR'S EASE COSTS

DESCRIPTION	COST
Estimated Average PC/MODEM Hardware Cost	$ 800.00
Initial COMPUSERV Signup and PC3 Telecommunication Program Purchase	$ 50.00
PKZIP File Compression Program	$ 47.00
COMPUSERV Monthly Subscription Fee	$ 50.00
NSC JAX EASE Program (EQUOTE)	FREE

(NSC San Diego, pg 6, 1991)

Of course, the hardware can be used for any variety of other applications desired by the contractor and the extremely limited time required on line with COMPUSERV in no way justifies a dedicated telephone line.

To use the system, the contractor first subscribes to COMPUSERV and purchases the PC3 package for EASE access. The next step is registering as an EASE user with the nearest NSC. Once the NSC has accepted the registration and assigned a CAGE code (required to access EASE), the CAGE code is mailed to the vendor, providing notification of authorization. By accessing COMPUSERV via PC3, the user can download the NSC JAX EASE program EQUOTE. The vendor has on-line access to an EASE Users manual, NSC policy manuals, and all the RFQs posted on EASE.

To use EASE the user executes PC3 and selects Download RFQs from the Main menu. PC3 dials, connects, and logs onto COMPUSERV. The user specifies the desired criteria for the RFQs to review, such as specific area. PC3 transfers copies of the desired RFQs from COMPUSERV to the vendor's PC. The user now exits PC3 and executes EQUOTE.

EQUOTE displays its main menu from which the user selects VIEW OR PRINT RFQs. After choosing the desired RFQ to respond to (bid on), the user selects PREPARE RESPONSE TO RFQs (YOUR QUOTE) and answers the program's prompts, providing prices and remarks. Finally, the user selects PREPARE

RESPONSE(S)/QUOTES FOR TRANSMISSION which archives the files with PKZIP in preparation for transfer to COMPUSERV.

Once again, the user executes PC3 and selects UPLOAD RFQs from the Main menu. PC3 prompts the user for entry of the CAGE code and date as a subject line to ensure correct identification of the quote. After the upload is complete, COMPUSERV displays a response number for the user to note. This response number will be referred to in the E-mail response sent to the user when the system successfully downloads this quote to the EASE Administrator site. The user checks E-mail by selecting ELECTRONIC MAIL from the PC3 Main menu and can communicate with the Purchase Sites or receive the confirmation for quotes received. Until personal or postal notification of award, the contractor is done with this RFQ.

4. Response Subsystem

This portion of EASE functions through use of the PC3, NEWQUOTE, and EASEMENU programs. PC3 is used to download the vendor's RFQ responses (quotes), NEWQUOTE unarchives the file, and EASEMENU changes the responses into APADE format. Initially, security concerns forced the EASE development team to break the electronic transfer physically from EASE to APADE. EASE printed the responses in bar code format that was subsequently scanned into APADE. A June 1991 upgrade to EASE

improved the process by providing direct and automatic transfer of the data.

First the operator executes PC3 and selects option 3, ELECTRONIC MAIL. PC3 dials, connects, and logs onto COMPUSERV. The operator then selects the xQUOTES.ZIP file and downloads it to the PC. The operator now exits PC3 to run NEWQUOTE. This program uses PKUNZIP to unarchive the responses from xQUOTES.ZIP file.

When executed, EASEMENU displays its Main menu from which the operator selects QUOTE PROCESS - CATEGORY 3. From the submenu, the operator selects PREPARE APADE INPUT (Option 2) that originally produced the bar code print out of responses, but, with the June 1991 upgrade, now posts the responses directly to buyer's worksheets in APADE. The operator specifies either all recently received quotes or quotes relating to a particular due date. The operator finishes the process by selecting COMPLETION REPORT (Option 4) and then REMARKS REPORT (Option 6) from the QUOTE PROCESS submenu. These selections produce the Completion Report and the Remarks Report that ". . . summarize the average number of responses per RFQ as well as the percentage of RFQs that receive quotes" with CAGE codes that produced each response (NSC San Diego's Purchase Site PC Station Operations manual (draft), pg 5, 1991). They also enable the buyers to review vendor remarks associated with their quotes.

By the close of 1990, at NSC JAX alone, EASE had achieved a fifteen percent improvement in small purchase efficiency (Ullrich, pg 7, 1990). It was estimated that only fifty percent of the small purchase awards were made using EASE with only approximately 350 vendors participating (Ullrich, pg 7, 1990). Presently two other NSCs, NSC San Diego and NSC Puget Sound, have been added to the system. NSC Charleston is expected to implement EASE in the future. The reductions in lead time (PALT) for award of small purchases combined with the reduction in manual labor required to make them has produced the potential for significant savings. Further, solicitations posted on EASE have seen an average of five responses per RFQ and a ninety percent response rate (Ullrich, pg 8, 1990). All this is indicative of "an unprecedented level of competition" due to use of the electronic media (Ullrich, pg 8, 1990). Such competition should earn the Navy further savings in the form of more competitive prices for its small purchases. The activities using EASE identified a number of significant advantages enjoyed by their buyers. NSC San Diego's Buyers' Desk Gluide to the Use of EASE, pages 2 and 3, lists advantages which include:

- No requirement to predetermine or select sources, except as may be needed to justify dissolving the automatic small business - small purchase set-aside
- Insulation from charges that buyers do not rotate small purchase solicitations among all qualified sources. The Quality Control solicitation preference does not apply to EASE RFQs

- The possibility of two or more quotations for price competition is very high, reducing the frequency of performing price justifications
- Buyers are not constricted in their solicitations by a dependence on the telephone to request quotes or to receive them
- Greatly lessened opportunity for error or misunderstanding as the contractors will "see" the entire specification and delivery data contatined in the RFQ versus data relayed by word of mouth
- RFQs become the award instrument with minimal input, speeding the award process
- Quotation data is input to APADE by procurement clerks, freeing the buyer to concentrate on ensuring that purchase descriptions are complete and accurate, that award evaluations are proper, and for verifying the accuracy of the award instruments
- Time saved with EASE RFQs permits more time to solicit by telephone those puchases which are inappropriate for EASE
- At a future date, award information is expected to be provided back to the contractor through EASE, eliminating BPA calls by the buyers

NSC San Diego further identified advantages for contractors using EASE to include:

- Full access to EASE RFQs, without the contractor having to market themselves to each buyer
- An electronic mail system for other communication or notices
- Greater flexibility in time planning of contractor sales personnel as EASE is available twenty four hours daily
- Access through local telephone lines versus long distance
- Greater visibility to Navy purchase needs
- Available twenty four hours each day; no busy signals
- Electronic quote records reduce paper storage needs

- Requirements are sorted by commodity for easier selection

The realized and potential savings generated by EASE are especially impressive when compared to the relatively insignificant investment required to develop it. The Navy's development costs are broken down in the following table.

TABLE 4.2

EASE DEVELOPMENT COSTS

DESCRIPTION	COST
COMPUSERV user/development charges (one time set up fee)	$ 30,000
COMPUSERV monthly subscription	$ 50
"Super" configuration PC	$ 7,500
Laser printer	$ 1,800
GM-13 EASE program manager/programmer annual salary	$ 40,000

(Ullrich, pg 7, 1990)

Operation of EASE incurs additional expenses in the form of subsequent PC hardware and EASE SYSOP personnel at each additional site. However, the savings and benefits of EASE have more than made up for these expenses and have enticed ever more activities to participate.

C. SUMMARY

This chapter focused upon details of the PC Board based procurement BBS and the Electronic Assisted Solicitation Exchange system which replaced it. EASE is just reaching a reasonably mature stage. It suffers from several inadequacies

which are not critical. First, it is too heavily dependent upon manual intervention. The first corrections were seen in the June 1991 upgrade that automated transfer of the quotes from EASE to APADE. Further such automation is required for EASE to realize its full potential. The manual separation of the responses into the appropriate xQUOTES.ZIP files for each of the purchase sites is a similar deficiency. There seems to be no logical reason for this manual intervention. A great advantage in efficiency may be realized in automating this segregation of the responses at the COMPUSERV server so that each purchase site may then download its own quote archive file. The EASE Administrator site (NSC JAX) should not loose its authority over the system. Rather it could reduce some of the manual intervention unnecessarily required of it.

The research review of EASE procedures identified many instances of multiple menu selections and program executions that could be combined and automated. This would further streamline the process, ensuring proper order of execution by eliminating the opportunity for manual operator error. Similarly, automation of the accuracy and content checks prior to and after upload of RFQs would streamline the system, reduce the opportunity for operators to make mistakes, and enhance the efficiency of the operation.

In its ultimate configuration, EASE should be almost entirely seamless and invisible to the purchase site. With further development, it could automatically handle

identification of appropriate RFQs for EASE posting as well as all the transfer details. In reality the groundwork has all been laid and the effort to finish EASE is relatively small. The system does work very well and only requires a few small, perhaps not easy, adjustments and enhancements to realize its ultimate potential. Recent telephone conversations with the EASE development team revealed plans to replace the PC based interface with direct communications between COMPUSERV and the TANDEM hardware on which APADE runs. This upgrade may resolve all the problems identified in the research.

Chapter V will be devoted to research intended to identify the best hardware configuration for the small purchase organization. Both procurement automation and telecommunication requirements will be considered in this analysis. Specifically, the intention will be to provide a platform on which to operate both APADE jr and the EASE system programs.

V. ANALYSIS OF PC HARDWARE & SOFTWARE

A. HARDWARE

The hardware platform on which the small purchase program runs can be of a variety of configurations. Each small purchase organization operates differently and has different requirements for its automation. Determination of what platform is best suited requires an evaluation of many factors including:

- Size of operation; number of personnel who will be using the system
- Office procedures; division of functions among specialized personnel versus universal operators performing all functions
- Workload volume and office tempo
- System performance and response time requirements
- Funding limitations for system acquisition

The size of the operation determines whether a stand-alone PC or a Local Area Network (LAN) will be required. Only the smallest operation with at most two or three operators could get by with a single PC. For larger small purchase organizations, LAN implementation is mandatory. The workload volume, performance and response time requirements, and funding limitations all shape choices of LAN configuration as well as what level of PC compatible processor is required.

1. Micro Computer

The systems considered by the research all run on IBM PC x86 compatible microcomputers. RPSV2 specifies any x86 processor with at least 640 Kilobytes (Kb) of Random Access Memory (RAM), 20 Megabytes (Mb) of hard drive storage, and recommends a color display. With an 8086 processor, this may be taken as a minimum hardware requirement for any of the PC based purchasing systems reviewed. For a very small operation with one operator using a stand-alone system this may be sufficient.

A larger hard drive, increased RAM, and faster processor are ways of increasing performance. If funding is a significant issue, older, lower performance hardware is very inexpensive and often available for reutilization at no cost. However, it is prudent is to obtain the best system possible for the given budget. Today, hardware prices are generally very reasonable for even fully configured high performance microcomputers.

A machine featuring a 486 processor (which includes a math coprocessor on the chip), hard drive in excess of 100 Mb, 8 Mb of RAM, high resolution VGA color display, and MODEM (for telecommunication) can be purchased for approximately two thousand dollars. Selecting anything less capable lowers the price, but, also the performance of all operations. The performance advantage leads to valuable labor savings and efficiency increases. Especially considering hourly personnel

costs, the extra expense for fast hardware is easily justified. Even a stand-alone set up may be made notably more productive by using higher performance hardware. The improvement in response time may make the difference between an automated system that is frustrating and burdensome with one that is productive and truly crucial to the operation.

In a LAN implementation, the server computer upon which the central database is located should have the best performance possible. It provides shared access to the purchasing databases for all the node computers and must be very fast to avoid delays as multiple users attempt concurrent accesses. The server computer typically has a much larger hard drive than any of the user computers. This allows room for the databases to grow over time, with system use.

Also typical in a LAN is the installation of a single printer at the server computer. By sharing this and other devices with all the users, the expense of outfitting every user computer with them is avoided. A further savings can be realized by using a monochrome monitor for the server computer. On-line access and use of its display is made only for LAN set up and maintenance tasks, therefore expensive color and graphics is not needed as it is for the application programs that will only be displayed at the user computers.

It is also common to use less expensive, lower performance user computers. However, the use of the highest speed (486) processors throughout delivers maximum

performance. This is because the user computer's processor actually processes the programs, although they are stored and accessed on the server computer's hard drive. The user computers can get along with much smaller capacity hard drives, but their processors should be as good as possible.

Many LAN vendors promote their products as capable of supporting up to seventy or eighty user computers for each server. Practical experience has shown that the limit for reasonable performance is ten user computers for each server (Schneidewind, IS3503 class lecture, 1992). It is not likely that the needs of a small purchase activity will exceed ten stations on a LAN, so this should not be a problem. If more stations are needed, multiple server computers may be used.

2. Telecommunication Hardware

Access to EASE and all its benefits requires telecommunication hardware. In the PC world this hardware is a MODulator/DEModulator (MODEM). This device converts the computer's binary signals into analog signals that are then transmitted over public access telephone circuits. It also converts the analog signals from the telephone circuits back into binary signal at the receiving computer, completing the communication link.

Similar to micro computers, these devices come in a variety of performance capabilities that vary directly with cost. This performance is measured by BAUD rate that very

loosely correlates to bits transferred per second. Today's standard is the 9600 BAUD MODEM that is approximately a three hundred dollar device. Lower speed MODEMs are less expensive, typically costing between fifty and one hundred dollars for 2400 BAUD. However, the relatively low cost of the higher performance MODEM easily justifies the increased expense. The time spent waiting, every day, twice as long for a slower MODEM, very quickly costs more than a few hundred dollars.

Such a device is not limited solely to use with EASE. It can provide access to a myriad of other telecommunication related functions. Remote access to mainframe computers, international computer networks, Bulletin Board Systems (BBS), and even remote operation of the system itself are functions made possible through the MODEM.

For LAN implementations, a single MODEM can be installed at the server computer. This one MODEM is shared with all the user computers.

B. SOFTWARE

The programs that are run to make these systems operate come from a variety of sources. Some are Government owned and do not cost Government activities anything. Many others are retail products that are, in some cases, quite expensive. Typically, software costs quickly exceed the investment in hardware.

1. Operating Systems

The Operating System (OS) is essential to any use of the computer. Typically the Government purchases PCs with the OS included. Most often Microsoft Disk Operating System (MSDOS) or IBM's PC DOS is the operating system that is included with PC compatible computers. Recently Digital Research has marketed its own DOS (DR DOS) which offers some enhancements over the old standards. Finally, IBM is about to release a new version of its OS2 operating system.

Due to the memory requirements of LANs and the quirks that the DOSs have had in dealing with RAM, certain DOS versions are favored. Versions of DOS prior to MSDOS 5.0 were unable to access memory above 640 Kb without other special memory management programs. MSDOS 5.0 and DRDOS 6.0 feature built in memory managers that provide access to high RAM. OS2 completely eliminates the 640 Kb barrier by addressing as much memory as is available in the machine as a single unit (contiguous block).

APADE jr. and RPSV2 have been run under both MSDOS and DRDOS without any problem. DRDOS includes a disk cache feature that significantly improves response times for disk accesses. It also includes built in drivers for Novell's Netware LAN OS (LOS) that further reduces RAM use when running on a Novell LAN.

2. LAN OS Software

Local Area Network Operating System software must be run on the server and user computers of a LAN. It provides communication between the users and the servers, managing all access to shared resources. There are essentially two different basic LAN configurations:

- Bus
- Ring

Some of the LOS programs are capable of operating for either configuration. PC LAN and Netware are examples. In each of the different topologies, it is actually the protocol which ensures proper access to the network. The following two sections are summarized from information contained in Understanding Local Area Networks by Stan Schatt (Schatt, pp. 30 - 34 & 40 - 45, 1990).

a. Bus Topology

The bus configuration consists of a common connection, central bus, to which all the user and the server computers are attached. The protocol allows any station to transmit when it detects an no carrier signal. If multiple stations transmit simultaneously, a collision occurs. The protocol must be able to detect this collision and signal all the stations to stop transmitting. This scheme is called Carrier Sense Multiple Access/Collision Detect

(CSMA/CD)(Schatt, pp. 40 - 41). After the collision, each transmitting station waits a random period and then retransmits. Performance of the CSMA/CD bus is characterized by good response at low loading with significant degradation as loading increases. This is due to increased collisions and retransmission attempts that eventually paralyze the LAN as loading increases. IBM's PC LAN can be used in for this and the ring topology while 3 Com's Ethernet is limited to the bus.

b. Ring Topology

The other configuration, the ring, is typified by IBM's Token Ring Lan Operating System and PC LAN Operating System. Physically, the system consists of a star to which the user and server computers are attached using a connecting device known as a Multi Access Unit (MAU). The protocol manages communication by passing a token around the ring. When a station is ready to transmit, it waits for the token. Once it receives the token, the station transmits its data with the token attached. The receiving station releases the token that the next transmitting station may then capture for its transmission. This configuration is characterized by slower performance at low loading due to the overhead imposed by token management. However, at high loading the Token Ring is much more efficient than the bus since collisions never occur.

3. DBMS Software

DataBase Management System software is not necessarily required for the running of the purchasing systems. SUPSHIP San Diego distributes RPSV2 with FOXBASE runtime. It is probable that a finished distribution version APADE jr. would be compiled to be self supporting. However, a fully functional DBMS does allow special access to the data. Since all these purchasing programs are written in dBASE, FOXBASE, or CLIPPER languages, dBASE and FOXPRO are the most compatible DBMS programs available.

The developers programmed APADE jr. in dBASE IV. Thus dBASE IV is a logical choice to enable the user to modify or enhance the system. RPSV2 is a FOXBASE program that would be best served by FOXPRO. The contractor wrote PADPS in the CLIPPER programming language, so either DBMS would be able to work with it.

Since the database formats are the same in all three cases, either DBASE or FOXPRO is able to access the databases. If the users are not concerned with modifying existing code, but instead intend to build one time special reports and queries, then they can use whichever DBMS is most familiar or offers the best features. FOXPRO is by all accounts a much more user friendly and advanced DBMS than DBASE IV. It offers a Graphical User Interface (GUI) that features multiple windowing, pointing device operation, and sophisticated database manipulation features. The user can

access data quickly using FOXPRO's 4GL Relational Query By Example (RQBE) and Standard Query Language (SQL) builder. Further, FOXPRO's advanced indexing capability makes it many times faster than dBASE IV in database searches and queries.

Whatever DBMS package is used, for LAN implementation, a record locking feature is essential. This ensures data integrity when multiple users attempt to access the same data. Record locking prohibits manipulation of a data element by more than one user at a time. Otherwise, the data could be read before updating was completed and the user would not get accurate information. Likewise, data updates could be lost entirely.

4. Telecommunication Software

This type of software is necessary to use the MODEM to transfer data to and from the PC over the telephone lines. It saves communication related parameters that include:

- Parity (odd or even)
- Bits per character
- Number of stop bits (1 or 2)
- Full or half duplex signal
- BAUD rate
- Data transfer protocols
- Communication port (COM1, COM2, COM3, or COM4)
- Dialing directory of systems and their telephone numbers
- User's preferences for system operation

- Some provide virus checking

The purchase activity accesses EASE by using the telecommunication program PC3 that is provided by COMPUSERV. It is specially tailored to perform all functions necessary to dial, connect to, log onto, interact with, and transfer files to and from COMPUSERV. For access to EASE, no other telecommunication software is required. However, no other external system can communicate through PC3. Thus, access to other on-line services, BBSs, other PCs, or mainframes via telephone connection requires another communication package.

The industry standard has been PROCOMM for several years. These packages are usually either shareware or very reasonably priced retail products. The greatest noticeable difference is most often in the user interface and the functionality is essentially identical in the packages. The other telecommunication programs that are popular include:

- CROSSTALK
- BITCOM
- HYPERACCESS
- QMODEM
- BOYAN
- TELIX
- Many others

5. EASE Programs

Other than PC3, the only EASE software required at the purchase site is EASEMENU. This is a proprietary Navy software that is available to Government agencies at no cost.

C. SUMMARY

This chapter has been devoted to comparing some of the alternatives available when configuring automation for the small purchase activity. The hardware and software suites necessary to run the small purchase programs and the EASE programs are easily obtained, low or no cost, and standard configurations. The selections of many of these items should be based upon individual office peculiarities but, in the hardware, selecting the best within budget constraints will maximize the system's performance.

Chapter VI will propose the design specifications, structure, and source code for the communication module for the micro based small purchase contracting program. Modifications necessary to make the original purchase program communicate with EASE will be highlighted.

VI. DESIGN OF THE COMMUNICATION MODULE

A. PROCESSES

The communication module is identified as Process 5, Electronic Communication Process. This module functions as the interface between APADE jr. and EASE. It is further broken into three submodules:

- Process 5.1, Prepare Output to EASE
- Process 5.2, Prepare Input from EASE
- Process 5.3, Prepare EASE Award Notification

The data flows between these processes, APADE jr., and EASE are detailed by the Process 5 Data Flow Diagram found in Appendix A.

1. Process 5.1

The design of the Prepare Output to EASE submodule was initially expected to detail a simple translation routine. It was to intercept the RFQ (SF 18) printer output from APADE jr., convert it to the appropriate format, and save it in an ASCII text file for manipulation by EASEMENU for upload to COMPUSERV via PC3. The format of this file would match that of the RFQ.TXT file produced by APADE, a sample of which is found in Appendix E. This design should have been very

straight forward and almost elementary, using the existing APADE jr. print routine.

However, as has been discussed in Chapter V, APADE jr. does not produce SF 18s. In fact, it does not even maintain all of the data required for RFQs. The lack of any user manuals and programming documentation combined with the convoluted structure of APADE jr. hid this fact until the later stages of the research. Because of this serious deficiency, the design approach required considerable modification and increased complexity. Also, due to the significant increase in the complexity of this submodule, it is the only one of the three to be prototyped.

The design of the Prepare Output to EASE module will still specify creation of an ASCII text file that emulates RFQ.TXT from APADE. Now, the module will include data entry and storage functions for all the RFQ data lacking in APADE jr. This will require development of a new data input forms (screens). Where possible, data supported by APADE jr. will be taken from existing databases.

a. Data Elements of RFQ.TXT

The research identified the data flows based upon the contents of the Standard Form 18, RFQ print out. Specifically, the sample RFQ.TXT file from APADE was used as a model for the output to EASE. Extensive discussion with the EASE Development Team leader, Mr. Russ Brahmer, further

clarified what elements were essential to EASE and what elements could be omitted.

The first data element is the Procurement Item Identification Number (PIIN) which comes from the RQNWORK.DBF file. The system provides the next element, the date of the printout. The Purchase Request number (PR #) comes from RQNWORK.DBF. The next element includes the buying activity's name, address, and phone number. The new module will find this data in the UIC.DBF file based upon the buying activities Unit Identification Code (UIC) default. The buyer's name and phone number is based upon the buyer code in the RQNWORK.DBF file. Using this code, the system retrieves the name and telephone number from the BUYER.DBF file. The Required Delivery Date (RDD) comes from RQNWORK.DBF. The EASE Distribution Group is the Federal Stock Group identifier found at the beginning of the item Stock Number. The Stock Number comes from the RQNWORK.DBF file. The CAGE code comes from the UIC file, identifying the buying activity. The Item Number will be generated by the new module. Quantity and Unit Issue comes from the RQNWORK.DBF file. Inspection requirements will be hard coded into the new module. The Nomenclature comes from the RQNWORK.DBF file.

The Item Description come from the RQNWORK.DBT file. This file contains all the memo field, called TEXT DESCR, entries for the RQNWORK.DBF file. The user must provide a UIC of the receiving activity. The new module will

use the UIC to retrieve the receiving activities Name and Address from the UIC.DBF file. Mark For data, the final receiving activity Name and Address, will be retrieved the same way. The dataflow diagram for Process 5.1, Prepare Output to EASE Process, in Appendix A, and the Data Flows for Output to EASE table, in Appendix F, provide further detail of where the elements of RFQ.TXT originate. While this submodule is designed only to produce an ASCII text file, printing out RFQs in Standard Form 18 format would require only a very minor modification.

b. User Interface

The interface for the new submodule was modelled after the existing APADE jr. input screens. Due to the numerous programming and recursion errors found in APADE jr., by design, operation of the new module was kept completely separate from operation of APADE jr. To perform Preparation of Output to EASE, the buyer must exit APADE jr. and execute the new program separately. After the creation of the RFQ.TXT file, the buyer exits the module and then executes EASEMENU to perform the next step in the upload to EASE process. After this, the user runs COMPUSERV's PC3 to actually upload the RFQ data and return to APADE jr. by restarting it from DOS.

c. Coding the Program

Mr. Nat Stevens performed the program coding of the Prepare Output to EASE process. The program was written in

FOXBASE because he is most experienced in this variation of the xBASE language. FOXBASE code is compatible with the dBASE format of APADE jr. and it enabled Mr. Stevens to quickly incorporate many of the routines from his FOXBASE coded RPSV2 programs that already produce Standard Form 18 print out. Appendix G contains the complete print out of the code.

The buyer executes the program RFQTXT.PRG from the dot prompt in dBASE by entering the command "RUN RFQTXT". This routine gets the system date and reindexes the RQNWORK.DBF, BUYER.DBF, and UIC databases. It then prompts the buyer to enter the Procurement Item Identification Number (PIIN) for desired for the Request For Quotation (RFQ). It then executes PAGE1.PRG.

PAGE1.PRG produces the first page of the RFQ.TXT file. It retrieves and positions essential buyer and purchase office data to match [illegible]sitioning used in the APADE produced RFQ.TXT. Appendix E provides samples of RFQ.TXT files produced by APADE and by APADE jr's Communication Module, for comparison.

Upon completion of the first page, RFQTXT.PRG calls PAGE2.PRG. This procedure prints the continuation pages of RFQ.TXT. It retrieves and properly places item purchase data. It then uses the UIC information to retrieve and place the names and addresses of both the intermediate and final receiving activities.

After all subsequent pages of RFQ.TXT have been completed, RFQTXT.PRG executes its final subprogram, CLAUSES.PRG. This simple program adds specific clause text and other clause names and references to the end of RFQ.TXT. It finishes by calculating and adding the total number of pages in RFQ.TXT. The file RFQ.TXT is now complete and saved in the same subdirectory with the program and database files.

Returning to APADE jr. from this point requires the buyer to restart APADE jr. from the dBASE dot prompt. A more seamless transition from APADE operations to preparation for and EASE processing was planned. However, resource restraints eliminated the ability to modify APADE jr. as would be required to use its menus to access these otherwise external operations. The problems with APADE jr. code and logic should be addressed before enhancements are programmed into it.

2. Process 5.2

The Prepare Input from EASE process is at least as complicated as Prepare Output to EASE. Due to resource constraints, its development was not attempted. Here the responses to quotes data would be broken out and stored in the appropriate APADE jr. databases. Further, this process would convert the data into the format required for APADE jr. It would maintain the relationships between the quotes, the providing vendor, and the requisition to which they applied throughout the reformatting and transfer.

The input for this process is the xQUOTES.TXT file provided by EASE. COMPUSERV's PC3 program would be used to retrieve this file. The program implementing the input process would then strip the required data from the ASCII text file. Unfortunately, no copy of an xQUOTES.TXT file was made available for the research and is not presented here.

3. Process 5.3

The Prepare EASE Award Notification process is, by far, the least complicated of the three subprocesses of the Electronic Communication Process. The research also failed to implement this process. Due to the use of E-mail notification presently used by EASE, this process would simply provide a printed list of the awarded requisitions. Along with each requisition would be the name and CAGE code of the vendor awarded the buy, price and quantity data from the vendor's response.

The buyer would access COMPUSERV's E-mail function using PC3 and would send E-mail messages to each vendor on the print out, notifying them of award of the buy with the price and quantity details. Inputs into the process would be the awarded requisitions. The only output would be the printed E-mail guide for the buyer.

B. SUMMARY

While only one third of the Electronic Communication module was implemented, this research proved that the

interface could be built between APADE jr. and EASE for at least one direction. Full implementation of the communication module requires correction of many problems within APADE jr.'s existing code.

Chapter VII will provide research conclusions. The research questions proposed in Chapter I will be addressed and recommendations for both small purchase automation and communications will be made. Finally, potential follow-on thesis research will be identified.

VII. CONCLUSIONS

A. CONCLUSIONS AND RECOMMENDATIONS

1. Automation of Small Purchase Functions

a. *Conclusion*

Automation can be applied to small purchase functions to realize significant improvements in efficiency, accuracy, response time, and workload. Automated systems are capable of tracking a purchase from submittal of the requisition through receipt of the item and certification for payment. The telecommunication system can provide the small purchase activity with improvements in competition, which should result in lower prices, and in reduced procurement and lead time.

b. *Recommendation*

NAVSUP's continued effort to develop a standard procurement program to be run on micro computers is recommended. At present there are vast multitudes of different systems attempting to provide automated support of small purchase functions, some with little success.

NAVSUP should compare the procurement programs in use and continue their development effort based upon the best features found.

2. APADE jr.

a. Conclusion

APADE jr., in its present form, is strictly limited to a prototyping role. It suffers from innumerable deficiencies, including wasteful data redundancy and an intolerable lack of data integrity. Further, the comparison with RPSV2 emphasizes its lack of many important functions. This is not to imply that the system is in any way a failure. It is a prototype and must not be considered as more than that.

b. Recommendation

Continued development of APADE jr. is recommended. As a prototype, this system is perfect for consultation with end users to help evolve the design specifications for the fully functional, production version of APADE jr.

It is highly recommended that the functionality of RPSV2 be analyzed and incorporated into the APADE jr. development effort. For those activities who require micro computer based automation support immediately, RPSV2 is very highly recommended as a capable, fully functional, and well tested system.

Chapter III went into great detail in comparing the different micro-based small purchase programs used at Naval Station San Diego with APADE jr. Operation of APADE jr and RPSV2 revealed that the former was deficient in many ways.

The greatest of its problems stemmed from programming and logic errors which keep APADE jr. from being a viable working system with required levels of data integrity. Endless loops, incorrect operations, and poor operator support are characteristic of the problems. Documentation for installation, operation, and maintenance of this system is nonexistent. Its output is absolutely restricted to filling preprinted DD Form 1155, Purchase Orders. Before any command can trust its purchasing operation to this package, major upgrade and correction of the deficiencies is required.

RPSV2 fits at the other end of the scale. It is robust, capable, and feature filled. It is capable of more functions than any one purchase operation is likely to need. Therefore, RPSV2 is useable to a wide variety of purchase activities. In support of development of a NAVSUP standard and immediate implementation requirements, the research recommends this package as far preferable to the alternatives compared.

3. **EASE**

a. *Conclusion*

The Electronically Assisted Solicitation Exchange is a most beneficial and productive use of existing technology. It has provided measureable improvements in competition, item prices, lead time, and manual workload. It is a potential

candidate for DOD wide implementation under the new consolidation and standardization initiatives.

b. Recommendation

Continued development of EASE and the expansion of its purchase site and vendor bases is recommended. The more purchase sites and vendors on-line leads to efficiency gains for all parties. It is envisionable that, in the near future, all small purchases could be conducted over digital medium through automated systems such as EASE.

The proposed upgrades will bypass the present PC interface between EASE and APADE. However, this should not diminish the potential to link micro based procurement systems with EASE. It is recommended that PC/EASE communication interface be developed and maintained as EASE evolves.

EASE currently suffers from an unnecessary level of manual intervention which detracts from its benefits. However, recent upgrades have improved this problem and future enhancements are promised to further reduce the manual operation required.

The most significant recommendation is for the system to be made available to as many purchase activities as possible. The more EASE is used, the greater will be its gains in competition and price reductions. Further, the workload reduction offered is more important than ever to all DOD activities. With increased use both by DOD activities and

vendors, the system will continue to offer improved benefits to all of its users.

4. Micro-Based Procurement Program Telecommunication

a. *Conclusion*

A micro-based procurement program telecommunications is essential to the small purchase organization's ability to fully realize the benefits of automated systems. The communication interface between the automation and EASE enables the small purchase organization to enjoy the same benefits as the regional centers. With manpower becoming less available, this is an essential enhancement.

The research further concluded that development of the communication interface between APADE jr. and EASE was reasonable and it was able to design and prototype a communication module providing this function. The design of the module broke it into three subprocesses of which only one has been implemented and prototyped. Creation of the RFQ output to EASE was identified as the process for implementation.

b. Recommendation

The continued development of communication capability for micro-based procurement systems is recommended. The developer of RPSV2 is sure he could quickly develop such a capability for his system and has proven as much in the

prototyping of part of the communication module for APADE jr. NAVSUP is recommended to incorporate such capability, especially EASE compatibility, into its continued APADE jr. development effort.

The APADE output to EASE is in the form of an ASCII text file. The research analyzed the content and format of this file to identify the data required to be manipulated by the module. The resulting program, RFQTXT.PRG, was written by Mr. Nat Stevens in FOXBASE. It calls three other programs, PAGE.PRG, PAGE2.PRG, and CLAUSE.PRG, to use APADE jr. and buyer keyed data in producing an RFQ.TXT file for EASE. Continued development based upon this effort is recommended.

B. RESEARCH QUESTIONS ANSWERED

Can APADE jr. be enhanced to provide a telecommunication function to enable small NFCS procurement activities to access and benefit from EASE? The successful production of an ASCII text file, RFQ.TXT, which conforms to the layout and content requirements for EASE is the key to the output portion of this question. The Communication Module RFQTXT.PRG proves that the telecommunication function can be implemented, even though the Response to RFQ and Notify Vendors of Award processes remain to be prototyped.

What is the best telecommunication software for integration into APADE jr? The requirements of EASE demand use of COMPUSERV's PC3 software to provide telecommunication

access COMPUSERV. Since both the EASEMENU and other EASE programs as well as PC3 have been customized for the process, use of them fulfilled standardization and efficiency guidelines. This choice may improve compatibility with future developments in the EASE system.

Should it be built into APADE jr. or can "off the shelf" software fulfill the requirements? As much as PC3 and the EASE programs can be considered "off the shelf" software, this is the recommended solution. There seemed little to be gained from redeveloping duplicate capability to run from within APADE jr. Further, APADE jr. is in need of many corrections to its basic functions before built-in enhancements are added to further complicate the problems. Retail communications products do not fulfill the requirements for accessing COMPUSERV and the EASE services.

How can the communication module be integrated to provide the best, most automatic transfer of data? Unfortunately, the EASE system using PC3 does not provide the best, most automatic transfer of data. As discussed in Chapter IV, excessive manual intervention is presently required for verifying upload RFQ data and preparing download quote data for APADE. Recent EASE upgrades address some of these deficiency, however, further automation of the process will help. Also, the separation of the APADE jr. Communication Module from the APADE jr. menus increases manual operation. Once the program is corrected and the enhancement is built in,

transition from purchase operations to communication operations will become far more seamless and efficient.

What is the content and format of the data that must be uploaded to and downloaded from EASE? Both the content and the format of the data required for upload to EASE was determined by analysis of the ASCII text file RFQ.TXT. The communication module is primarily concerned with creating a replica of this file so that EASE can retrieve the data from it. This research has succeeded in developing a module capable of producing such a data file from APADE jr and buyer keyed data. Analysis of the xQUOTES.TXT file from EASE would produce detail of the content and form of data required for download. This research was unable to conduct the necessary analysis nor produce the Retrieve Quotes part of the telecommunication module.

How can that data be converted from EASE format to APADE jr. format? The upload data is converted from APADE jr. format by writing to the correct position in the RFQ.TXT ASCII text file. While not addressed, it can be assumed that the conversion back from EASE format to APADE jr. format would require a program to read the xQUOTE.TXT ASCII text file. This program would locate data elements and write them into appropriate fields in the APADE jr. databases.

C. FOLLOW-ON WORK

There is substantial follow on thesis and development work required to produce systems that may be of productive use to small purchase activities. Continued efforts from this research include:

- APADE jr. correction and enhancement
- APADE jr. documentation
- Development of APADE jr. Communication Module Programs
- Remote Access Data Input to APADE jr.

1. APADE jr. Correction and Enhancement

As identified in Chapters III and VI, APADE jr. suffers from serious programming and logic deficiencies. It is actually a prototype system from which a functional production system may be developed. Follow-on work could use the deficiencies noted by this research to continue the development of a useable production version of APADE jr. The effort would design and code corrections to APADE jr. to make it a reliable system with data viability and user support necessary in a production program.

This work should include error checking, input corrections, and validation that is now almost entirely lacking. Further it should eliminate the data redundancy now present and the excessive use of resources that database systems are designed to eliminate. The developer/maintenance

programmer could even design and incorporate many of the features offered by RPSV2 to make APADE jr. a more robust and useful system. The redesign effort should include recording user response to the APADE jr. prototype.

2. **APADE jr. Documentation**

One of the major impediments to this research was the complete lack of documentation for APADE jr. Follow-on research could develop documentation to cover all aspects of the system, including:

- Installation Manual
- System Manager's Operation and Maintenance Manual
- User's Manual

The development of an Installation Manual would assist potential user organizations with the selection of hardware, the set up of individual and network systems, and loading of APADE jr. for maximum efficiency on a wide range of platforms and configurations. Chapter's III and V of this research provide a good beginning reference. The System Manager's Operation and Maintenance Manual should address management operations such as security, data backup and recovery, failure and error recovery, and fine tuning of the system. The User's Manual would provide step by step directions for all operator procedures from data entry to printing of forms. The RPSV2

Users' Guide provides an excellent format and content guide for such a manual.

3. **Development of APADE jr. Communication Module Programs**

This research succeeded in prototyping only one of three subprocesses identified for the Communication Module. Follow-on research could design and implement the remaining processes. Process 5.2, Prepare Input from EASE, would require analysis of the data content of the xQUOTE.TXT file that EASE transfers the quote data to APADE in. This process will strip that data out of the ASCII text file and write it to the proper database fields for the buyer to access in APADE jr. Process 5.3, Prepare EASE Award Notification, simply requires a smooth transition to the PC3 program for use of COMPUSERV's E-mail function. A better solution that would be far more complex, would be to automate the creation of the award notification from within APADE jr.

4. **Remote Access Data Input to APADE jr.**

Another telecommunications enhancement to APADE jr. that offers significant productivity gains is remote access for data input. Follow-on work in this area would design and implement a system to enable customers to dial up and type in or batch upload their requisitions into APADE jr. Implementation would reduce the manual entry of requisition data that must be performed by input technicians. The

analysis provided by Chapter III and Appendices A and B would provide good beginning reference for this follow-on effort.

D. SUMMARY

This research followed the thesis work which developed APADE jr. It began with an effort to analyze small purchase operations and the application of automation. It compared existing micro-based purchasing programs and analyzed the operations of EASE. Finally, it proposed the design and prototype of an interface between APADE jr. and EASE.

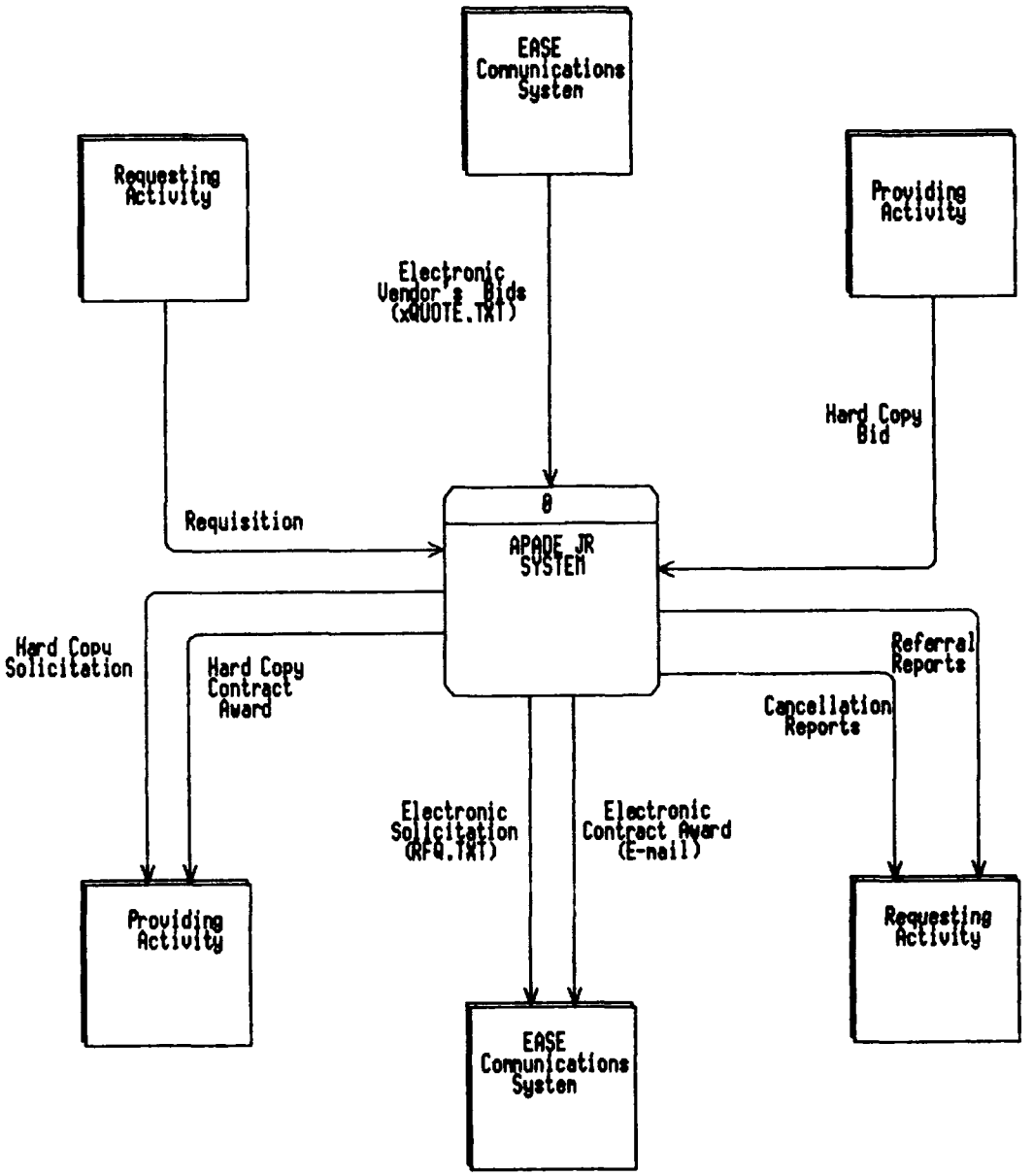
Most significant is the demonstration by the research that such an interface could be produced to successfully create the ASCII text file read by EASE, despite the complete lack of Standard Form 18 print capability in APADE jr. The work that was not completed, as well as recommendations to improve that done before, was covered by the discussion of potential follow-on work.

The systems reviewed and proposed by this research offer the opportunity to improve the productivity of our small purchase activities through the implementation of automated systems. With continued development, these systems will be available for all activities that need them. In the case of RPSV2, the system is capable and available now.

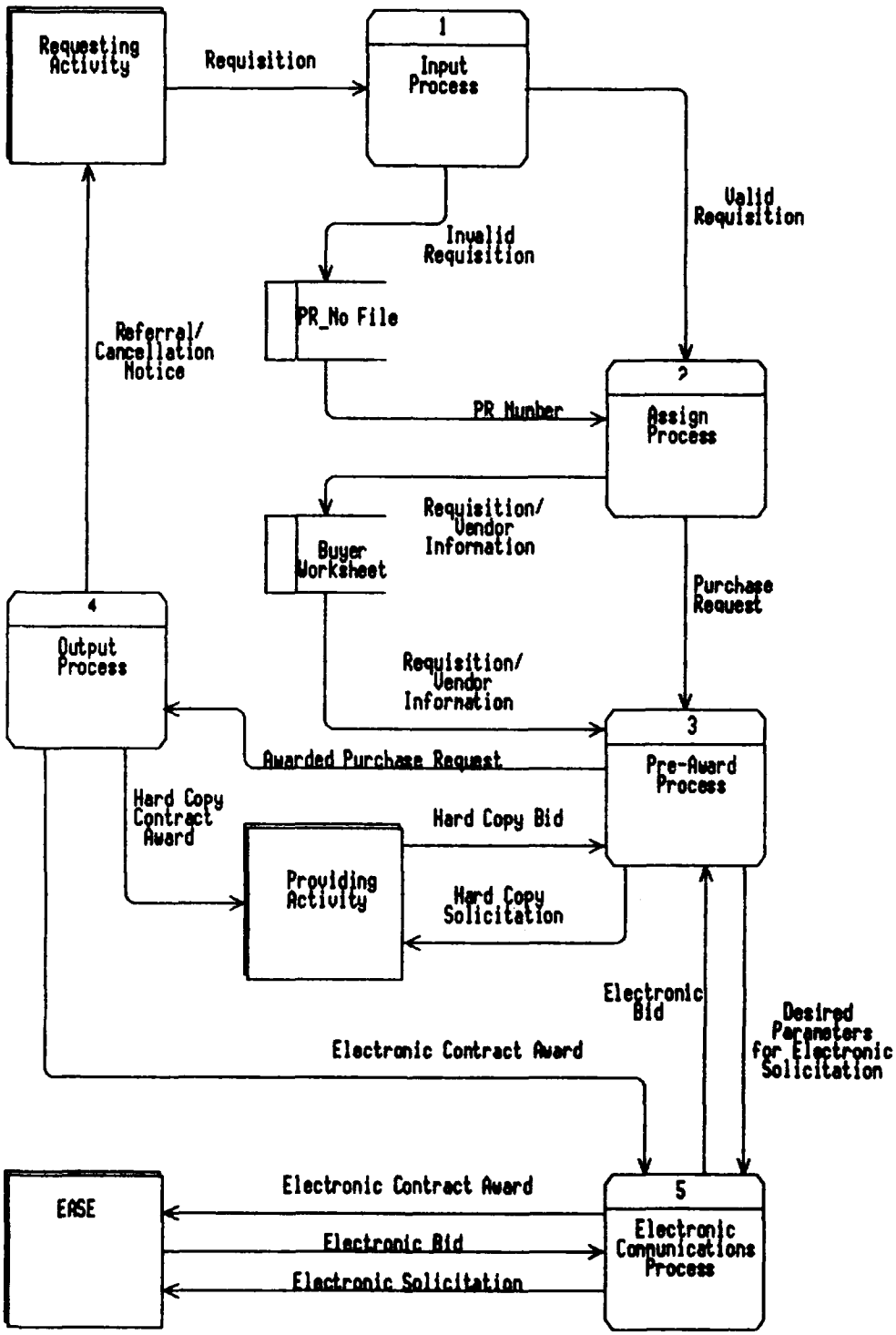
APPENDIX A

APADE JR. DATA FLOW DIAGRAMS

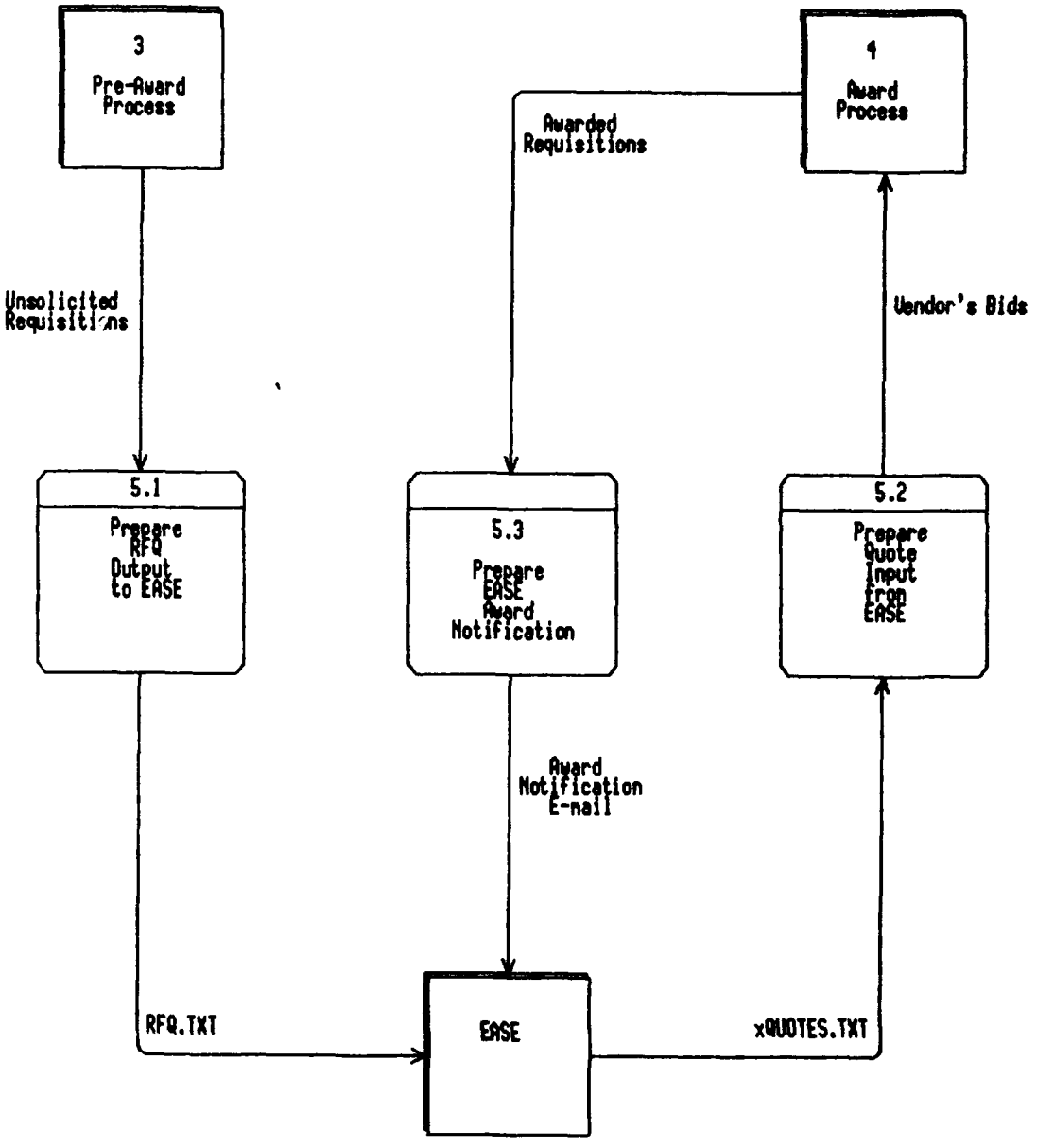
APADE jr Context Data Flow Diagram



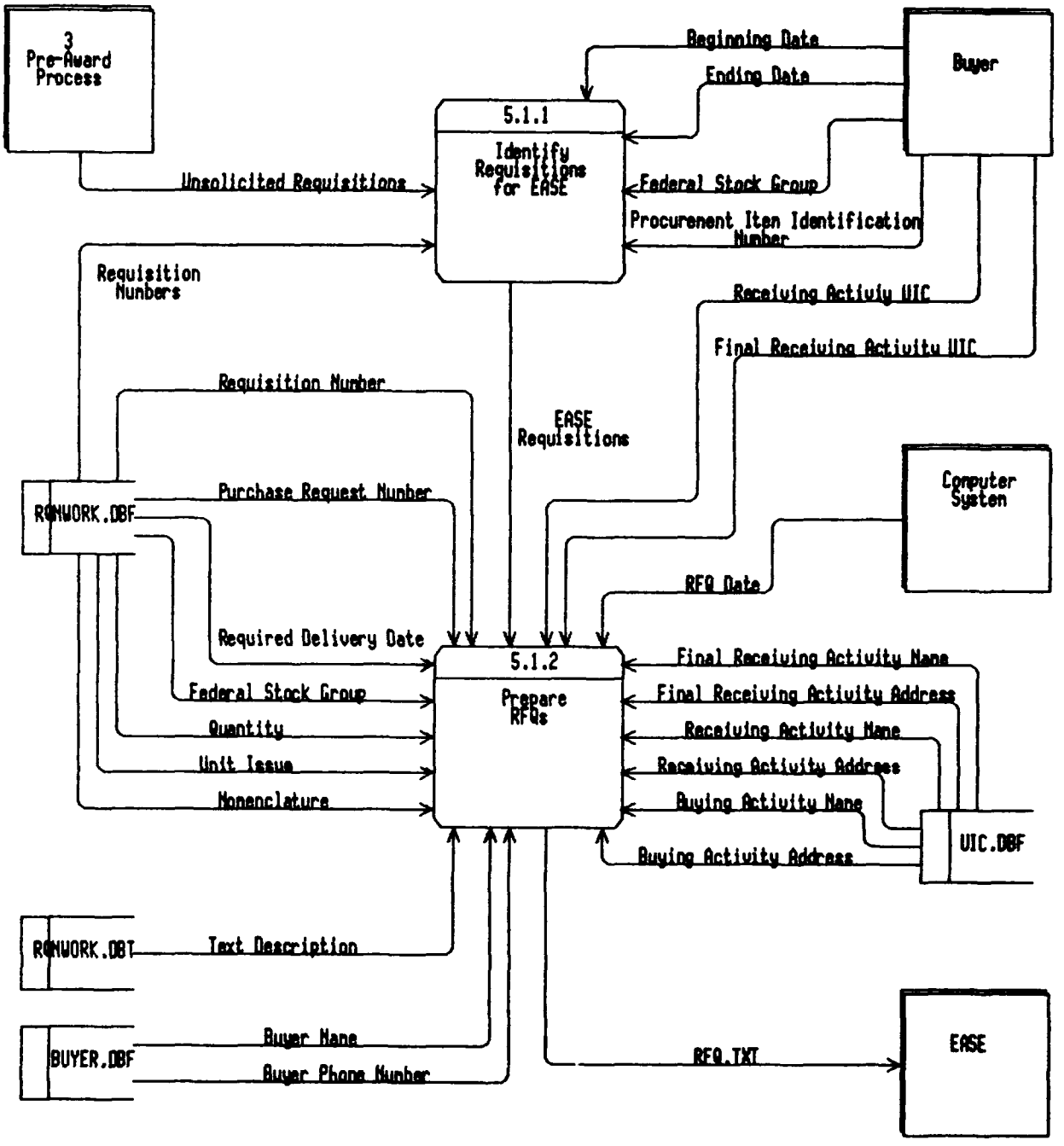
APADE jr Systems Data Flow Diagram



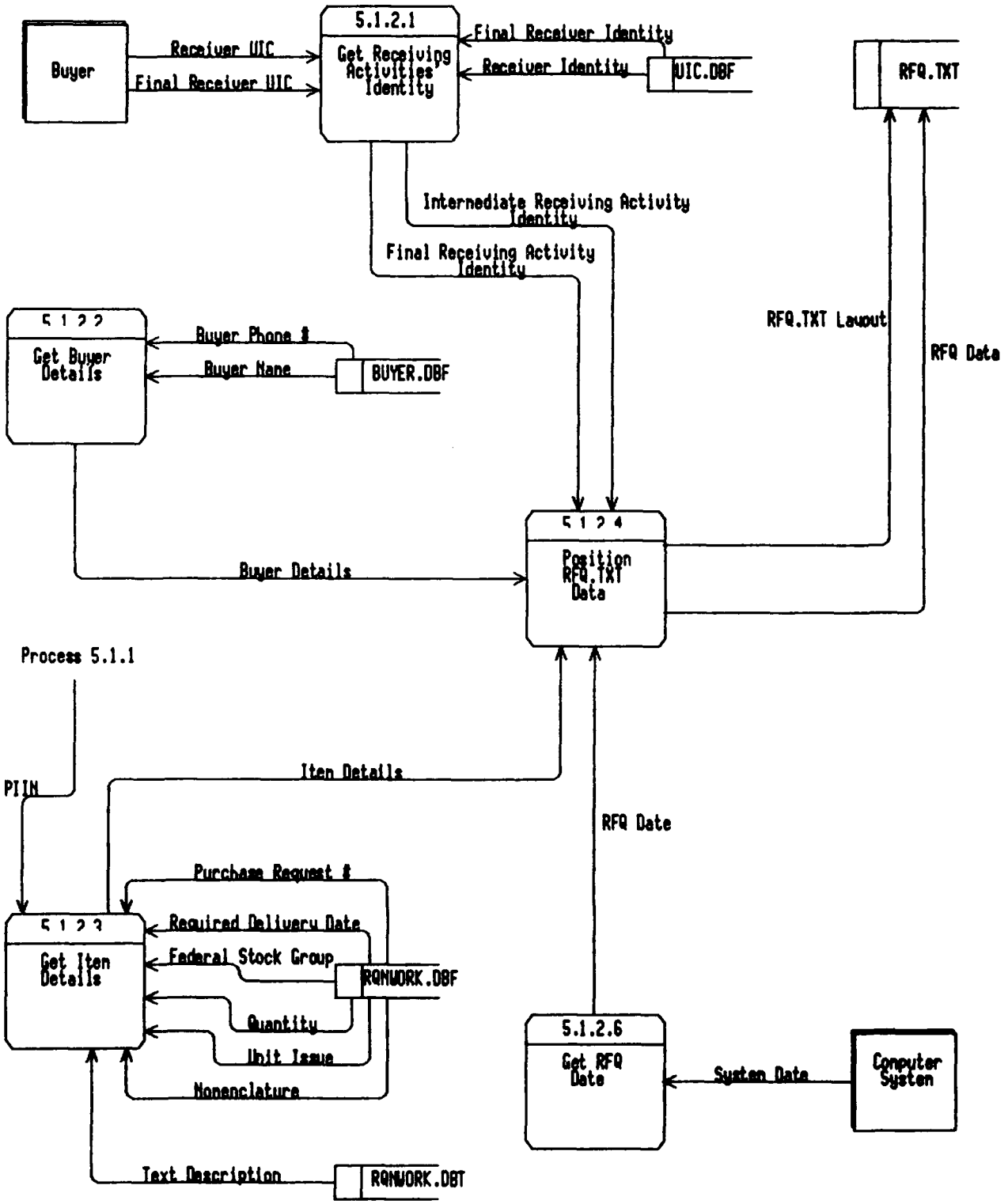
Process 5 Data Flow Diagram
(Electronic Communications)



Process 5.1 Data Flow Diagram
(Prepare Output to EASE)



Process 5.1.2 Data Flow Diagram
(Prepare RFQs)



APPENDIX B

APADE JR. PROGRAM TREE STRUCTURE DIAGRAMS

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Printed: 02/19/92 04:38:08

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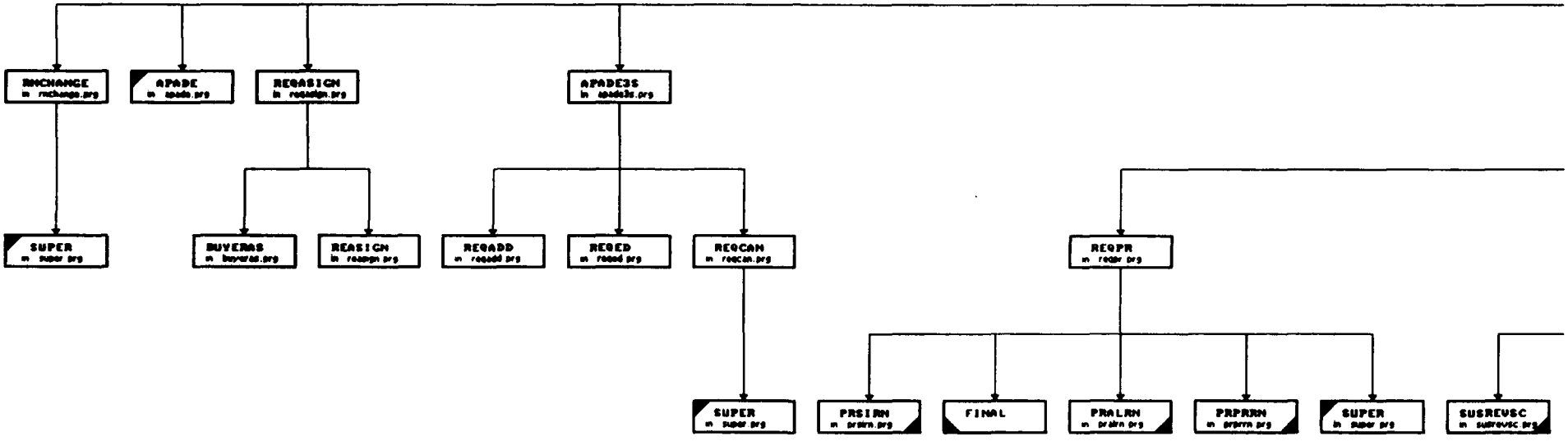
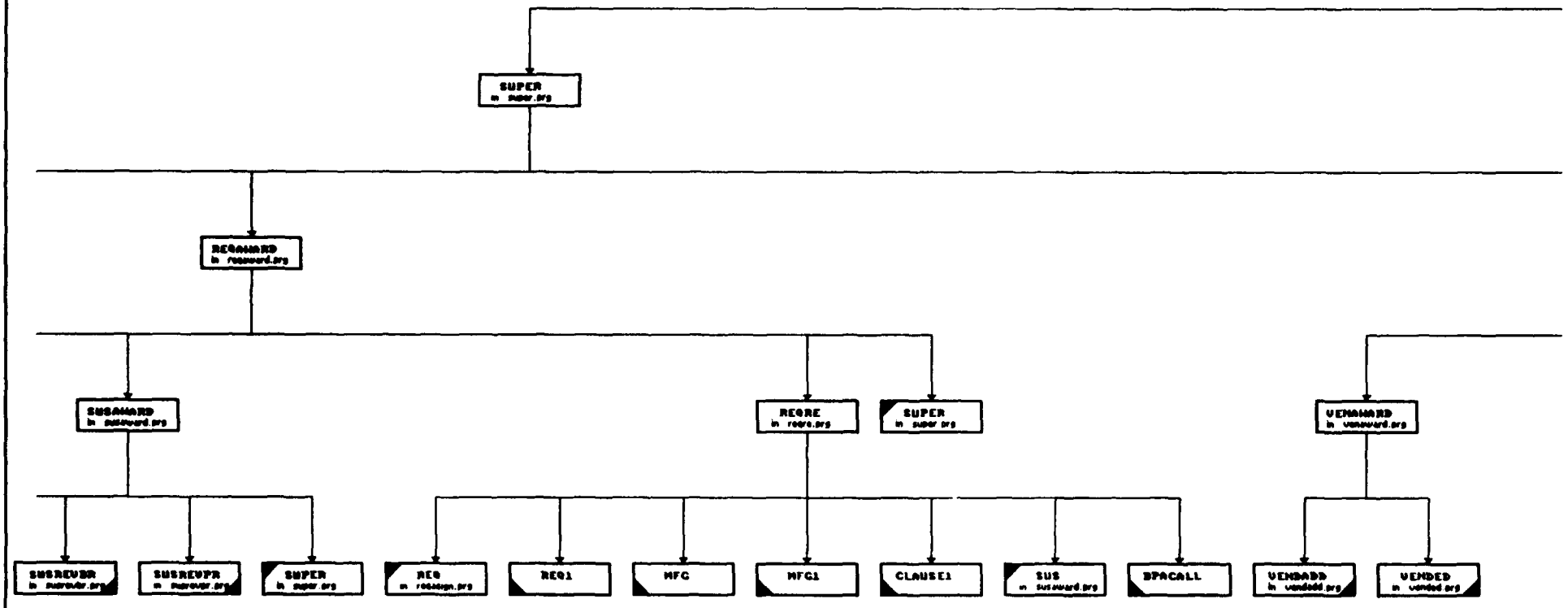
Page 1 of 5.



Programmer: STEVE BOWMAN
Description: TREE CHART OF APADE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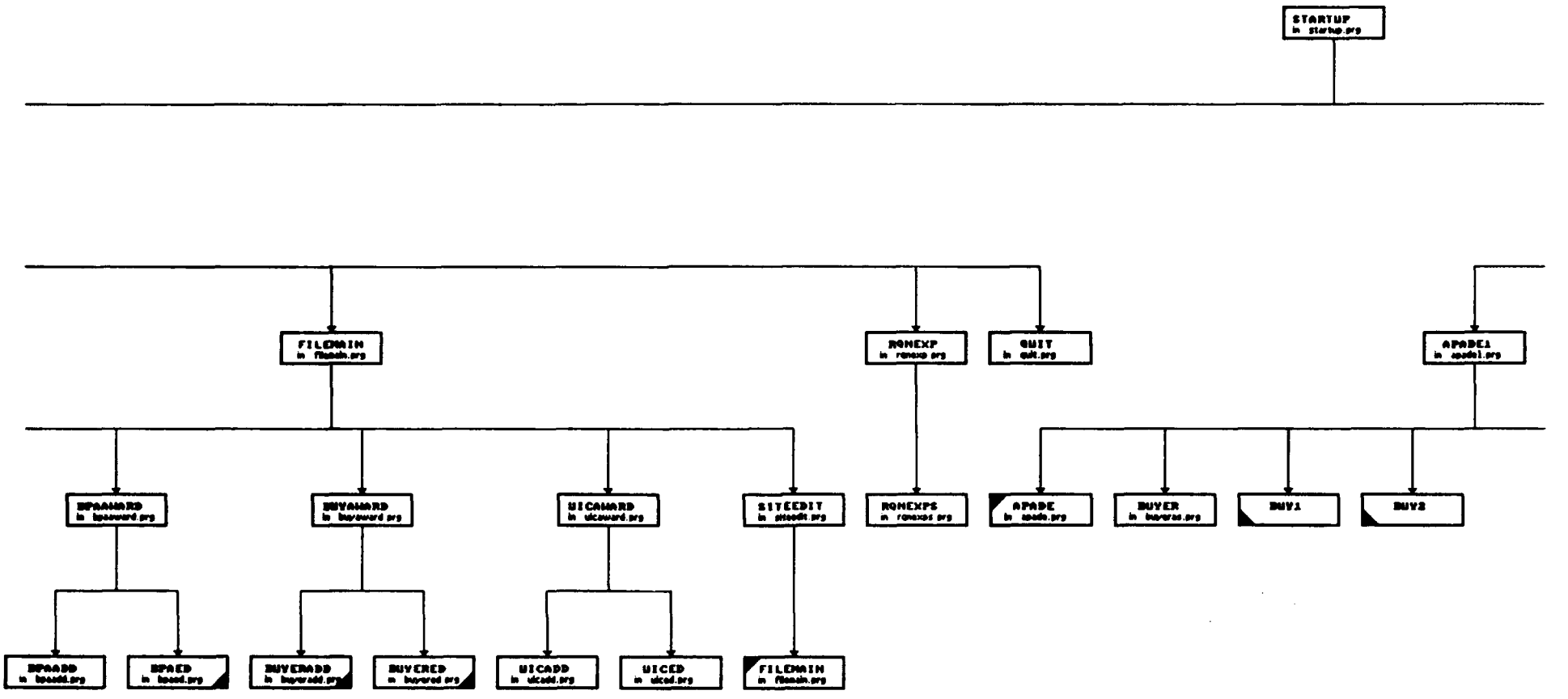
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BUYAWARD
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UICAWARD
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SITEEDIT
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RONEXPS
in ronexps.prg
APADE
in apade.prg
BUYER
in buyerss.prg
BUY1
BUY2
BPAADD
in bpaadd.prg
BPAED
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BUYERADD
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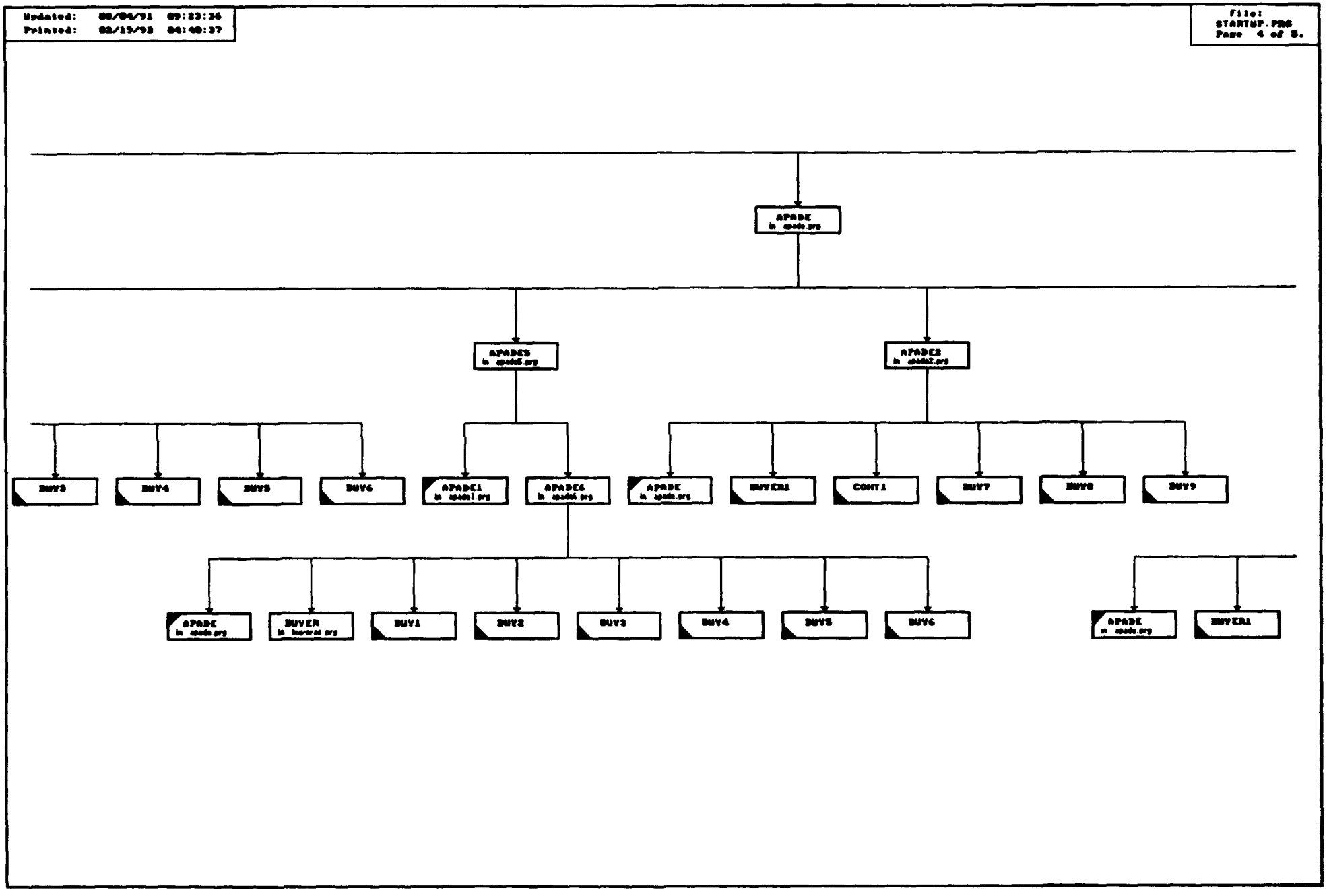
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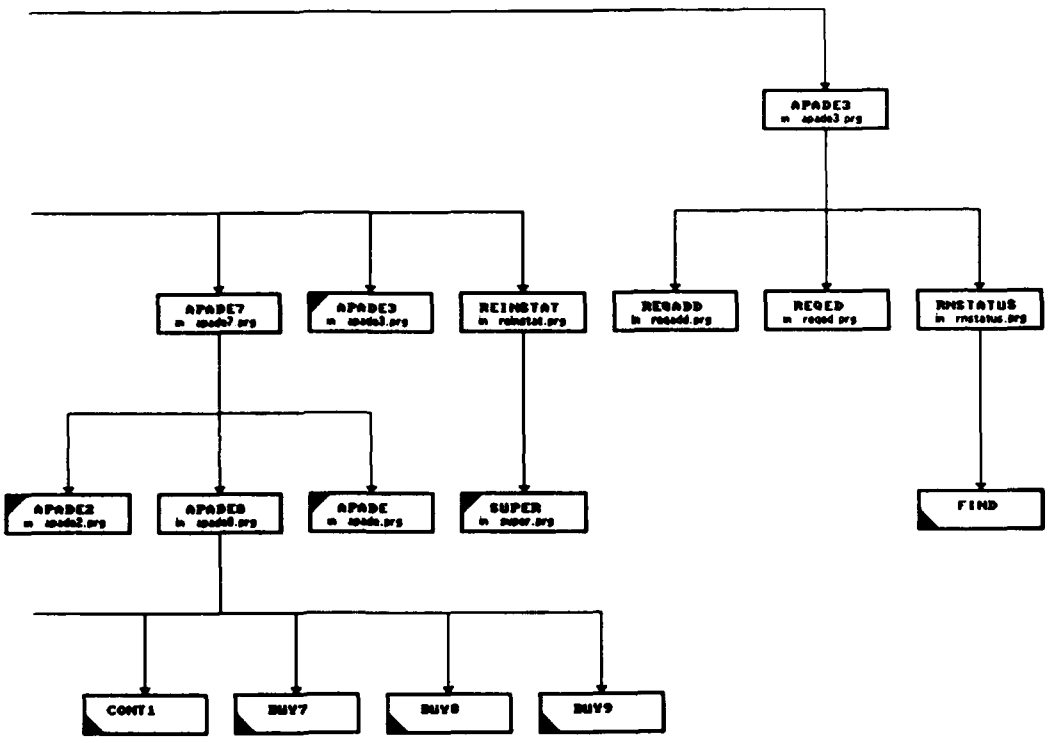

L E G E N D

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Page 1 of 5.

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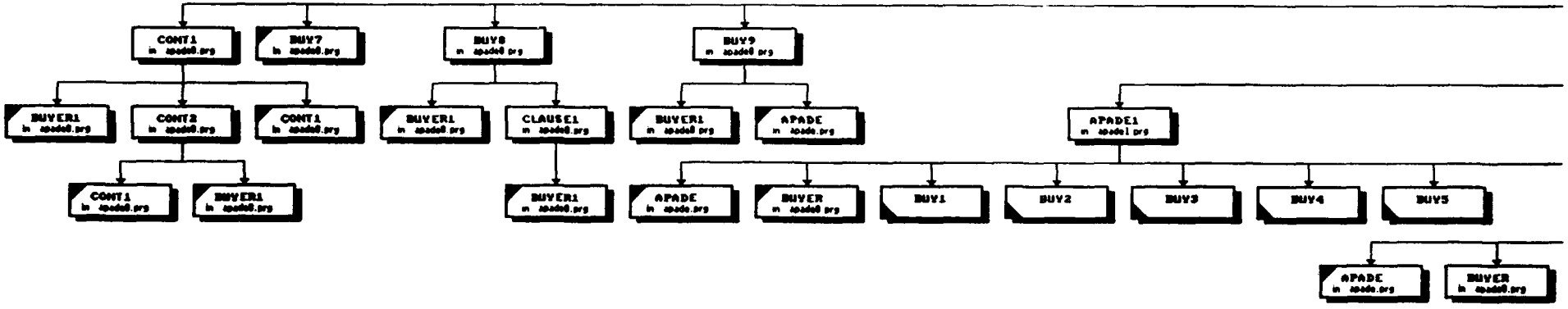

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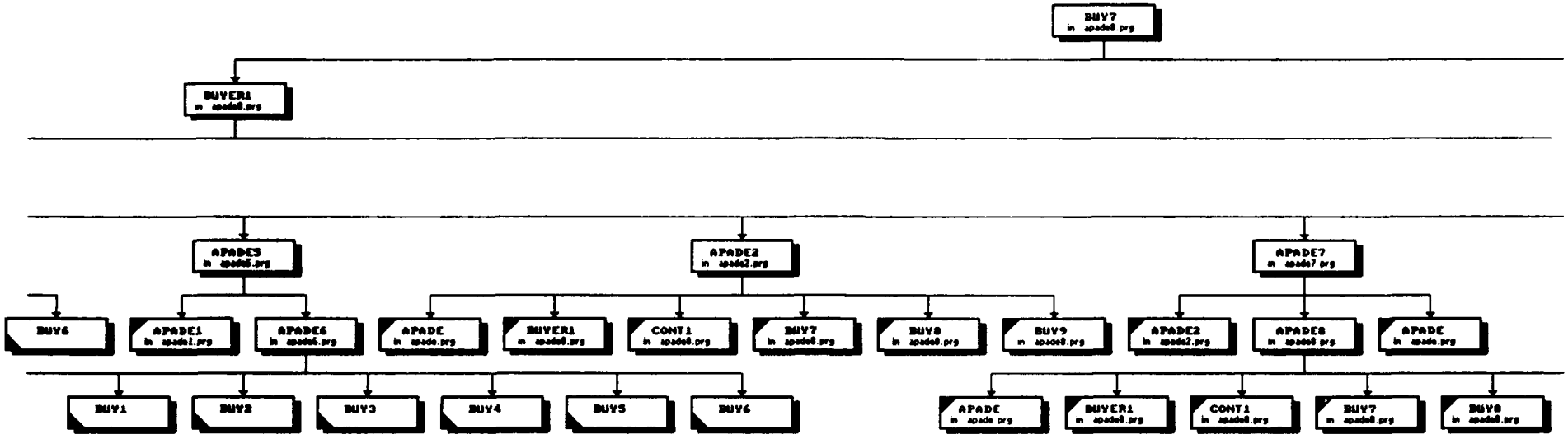
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BUYER1
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CONT1
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BUY7
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BUY8
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BUY9
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APADE8
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APADE
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BUY1
BUY2
BUY3
BUY4
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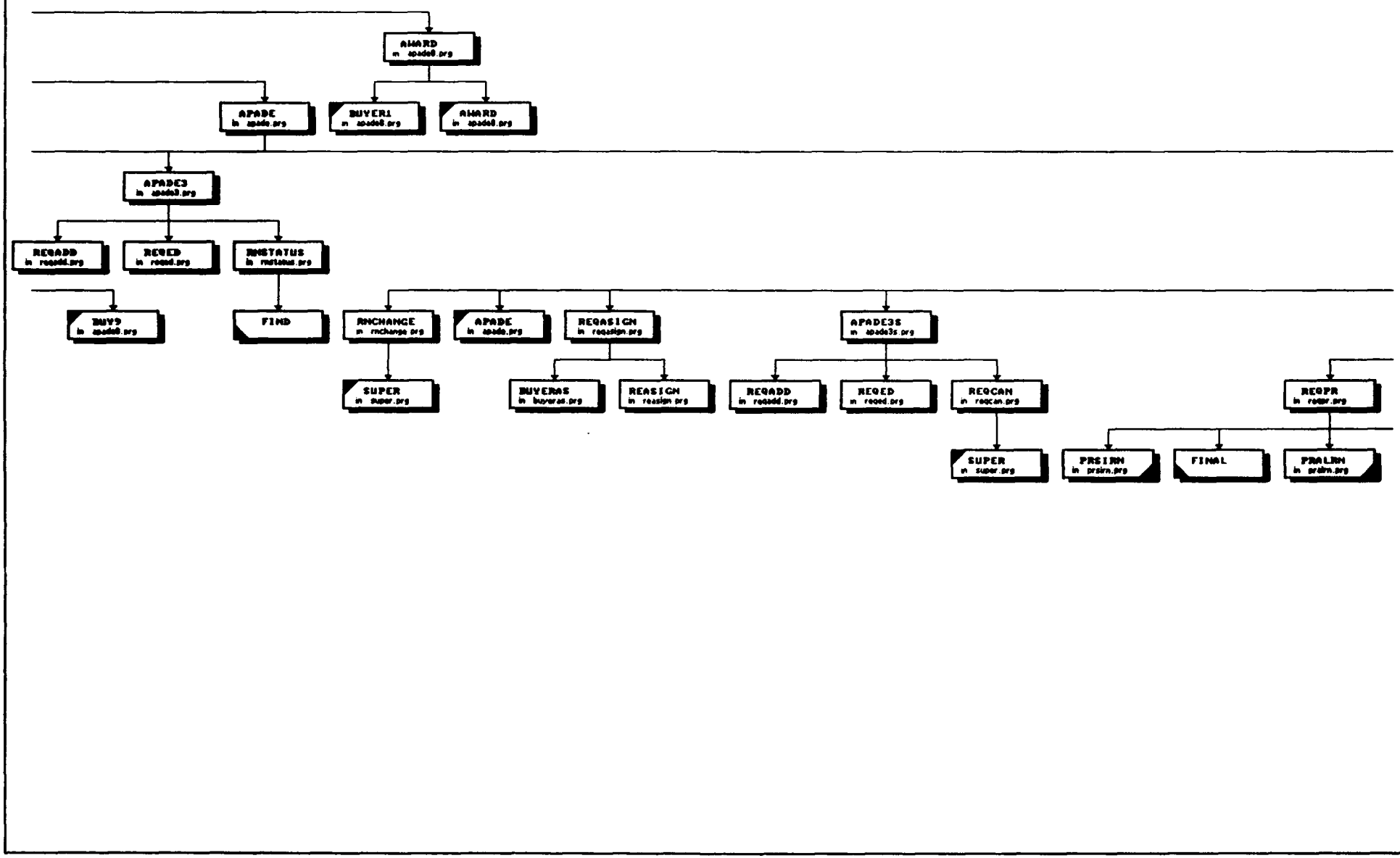
in apade8.prg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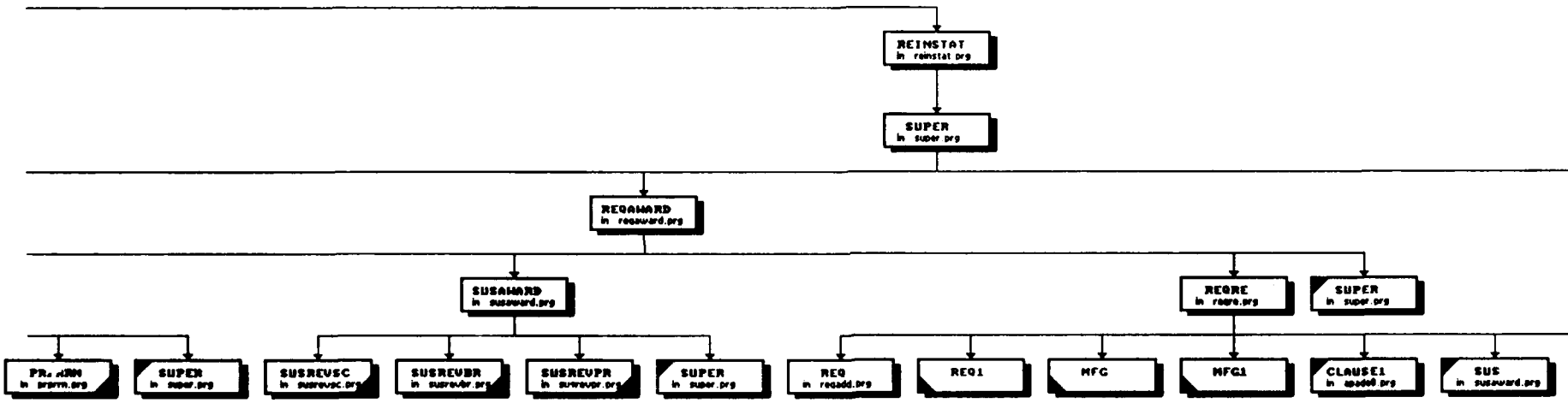
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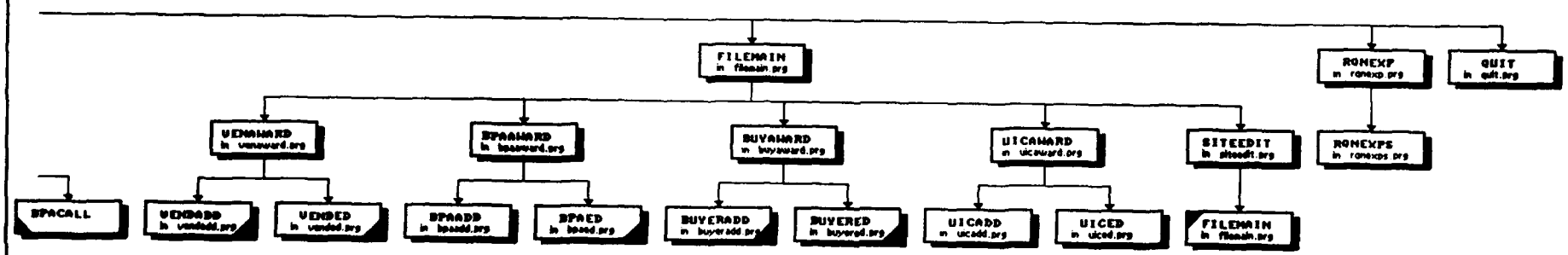

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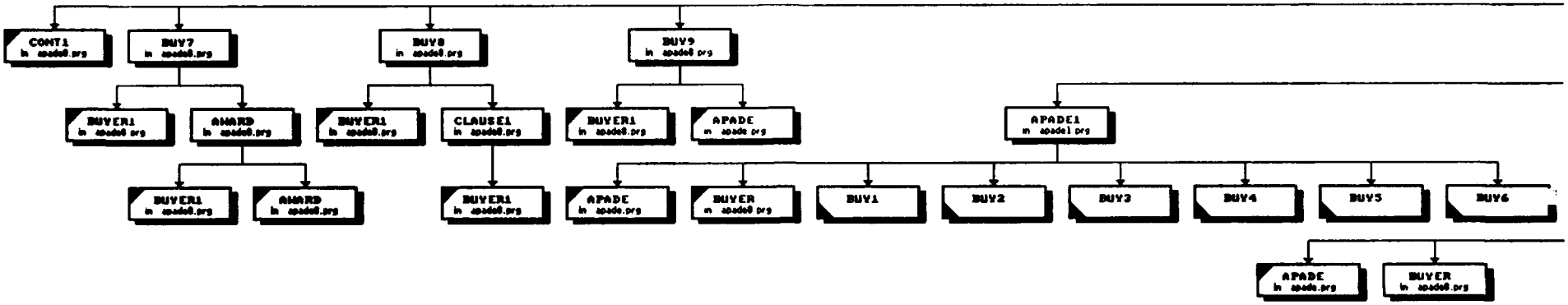

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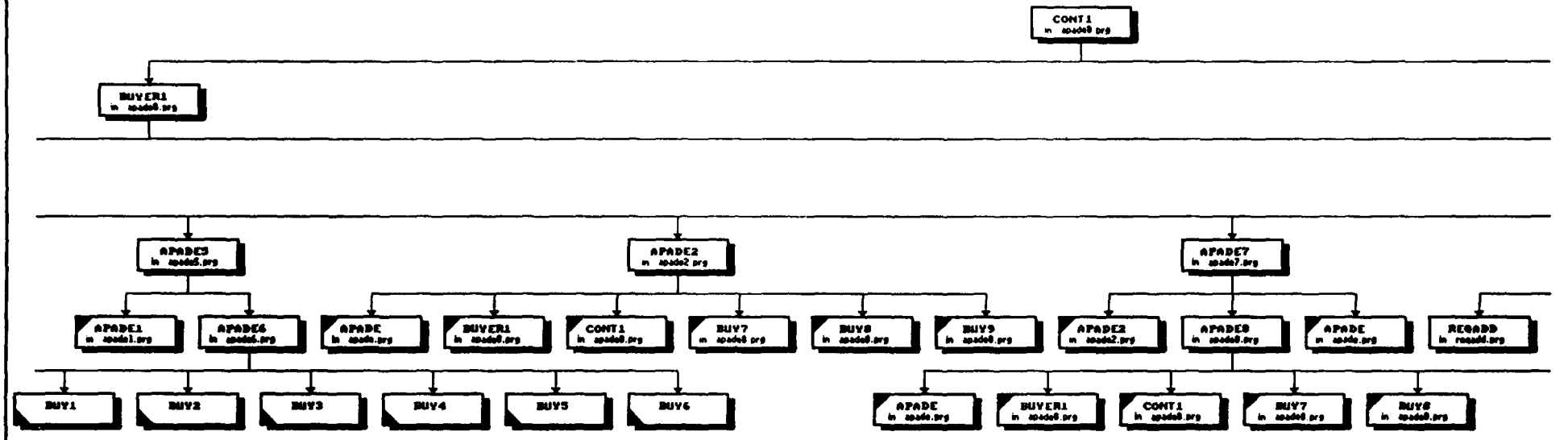
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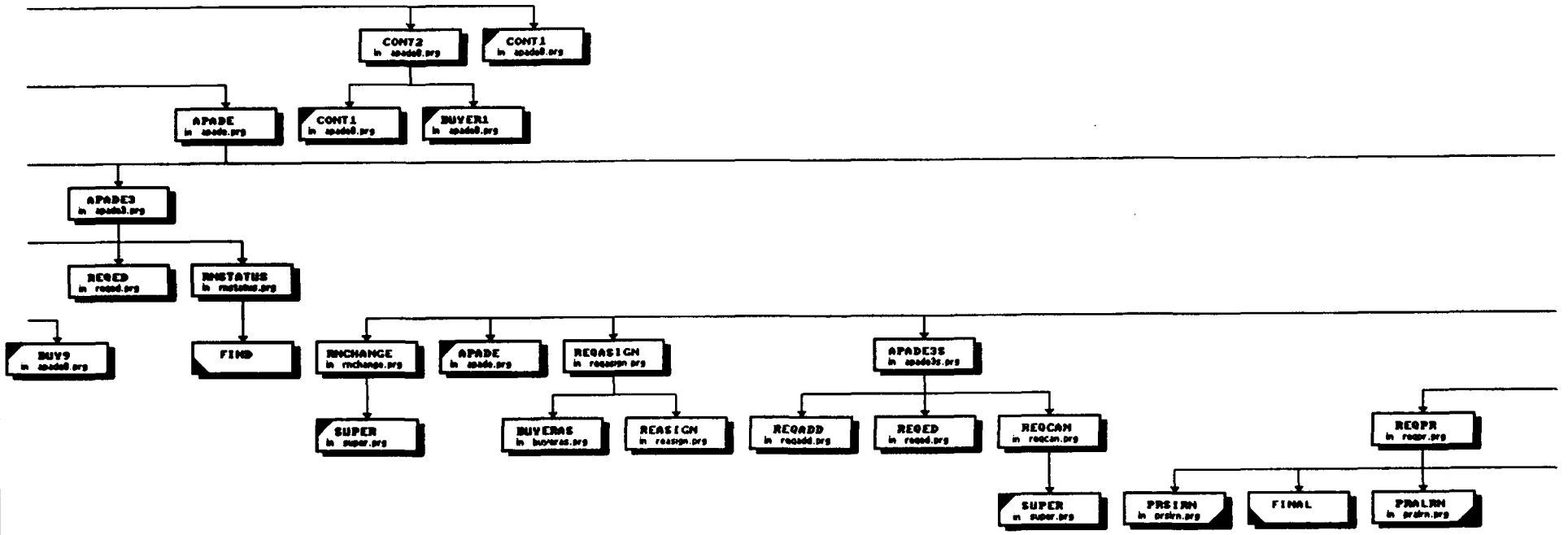
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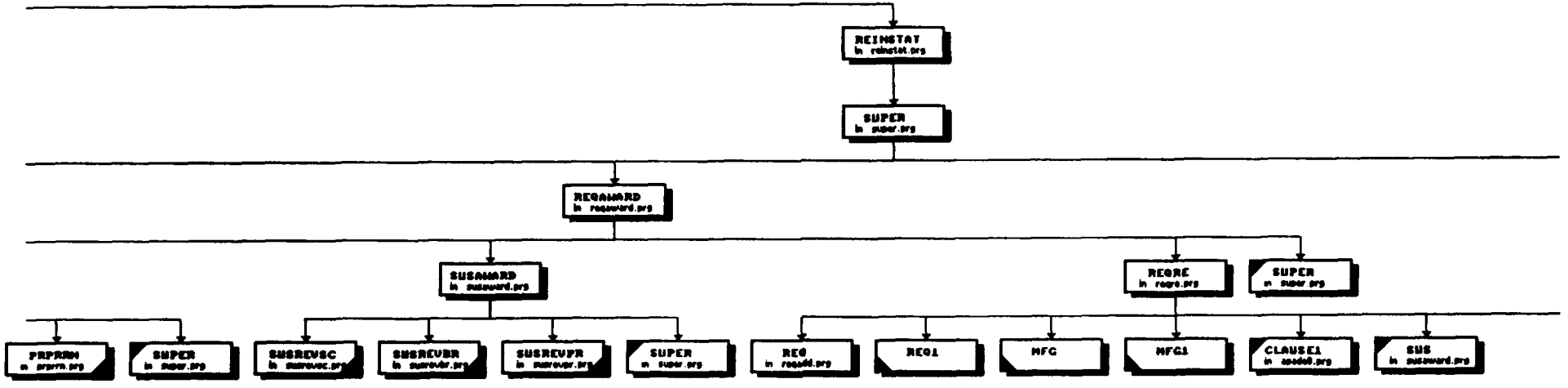
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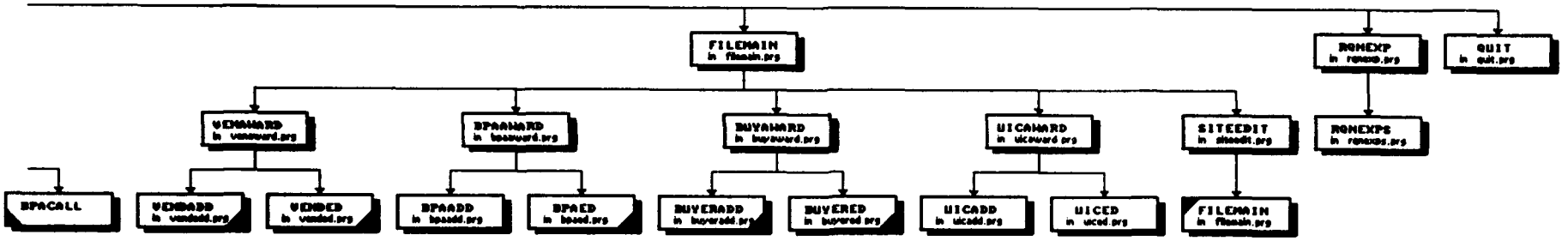

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Page 1 of 6.

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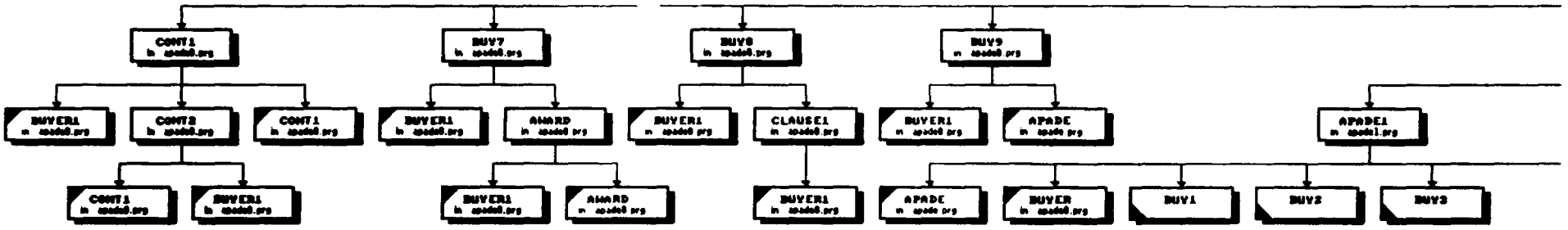

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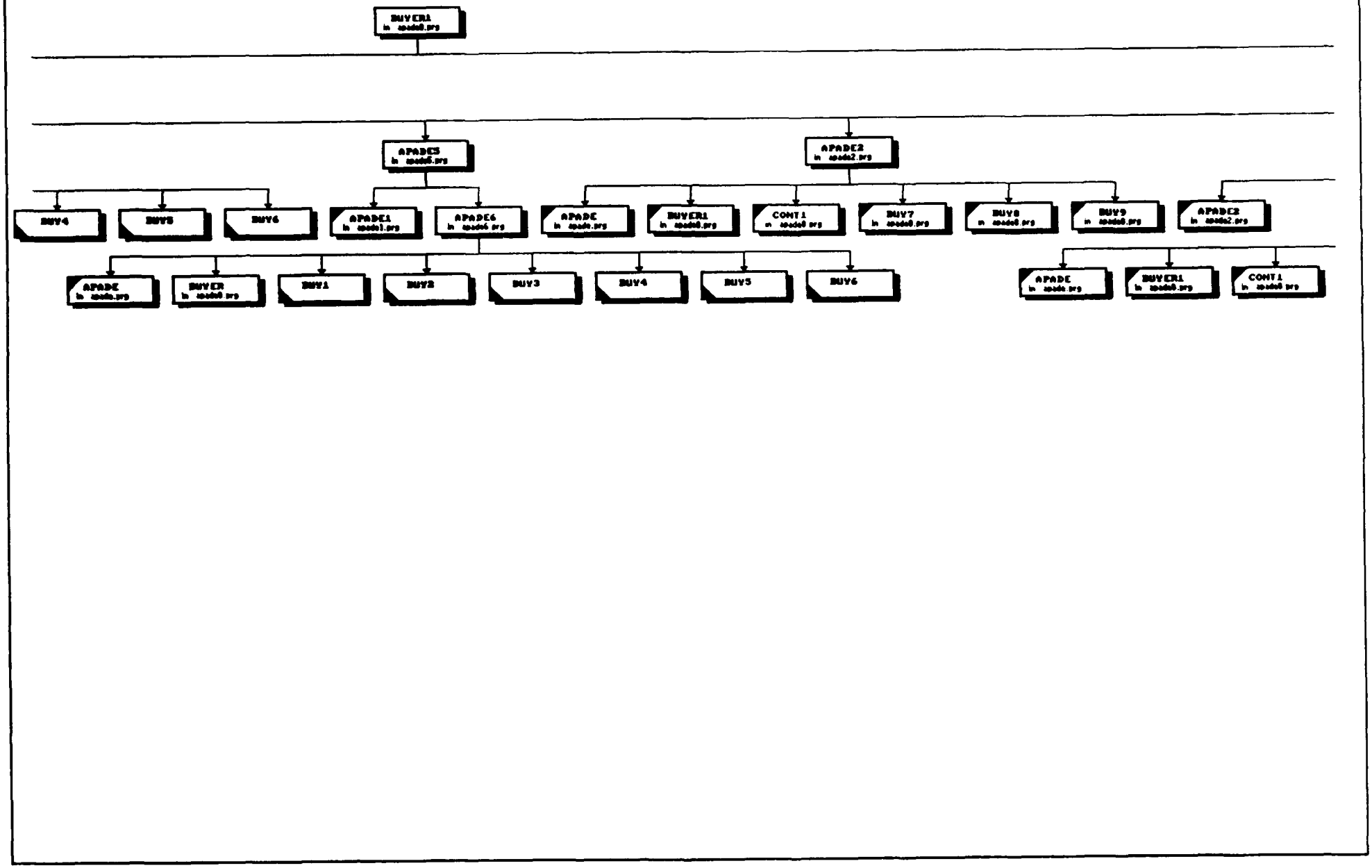
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BUYER1
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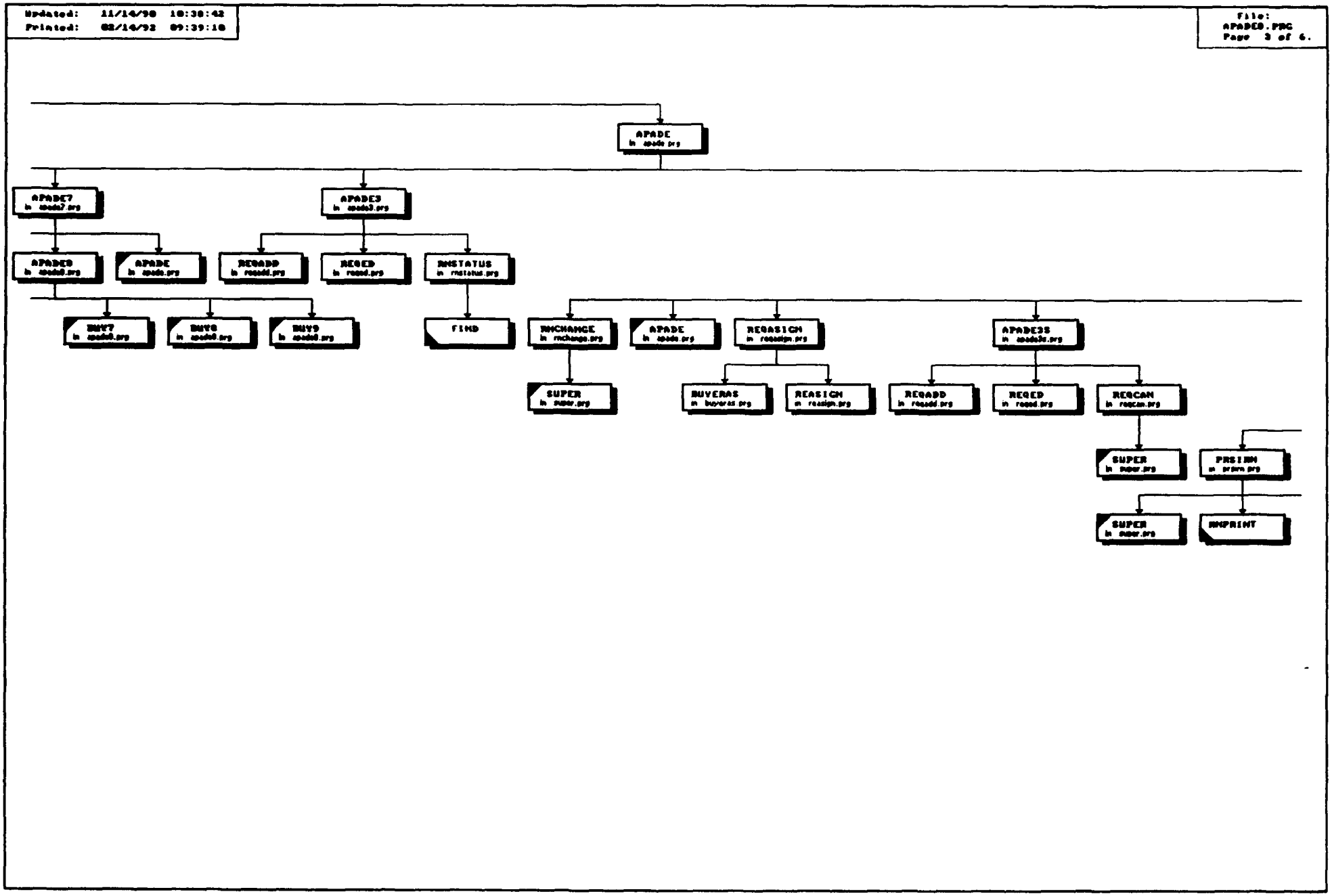
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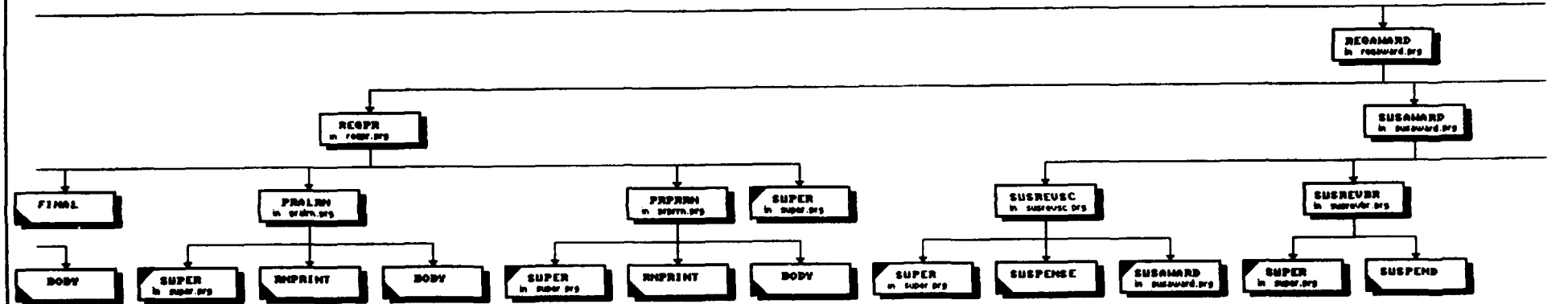
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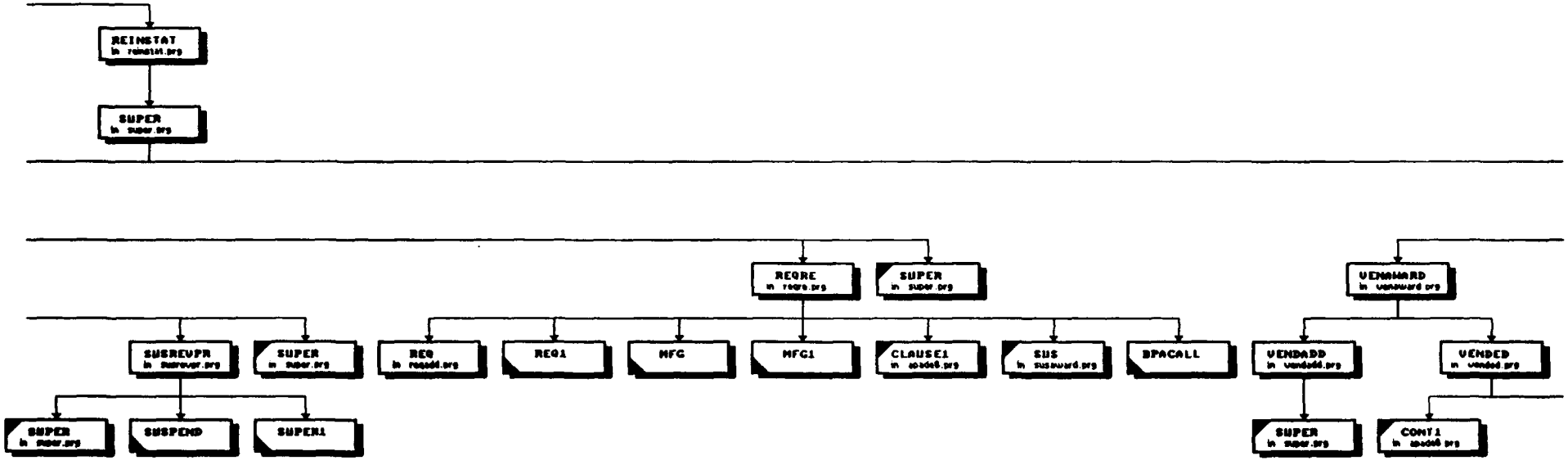
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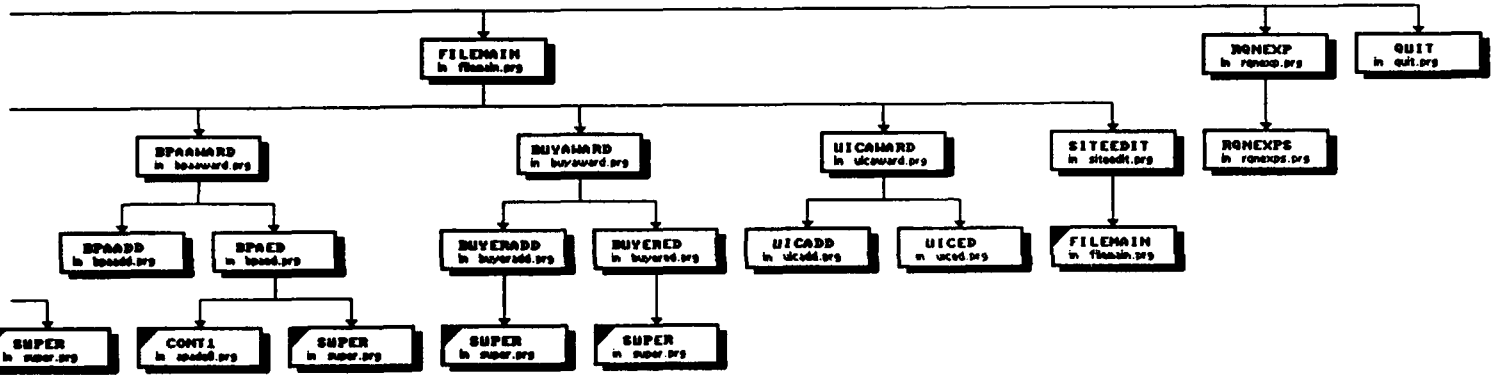

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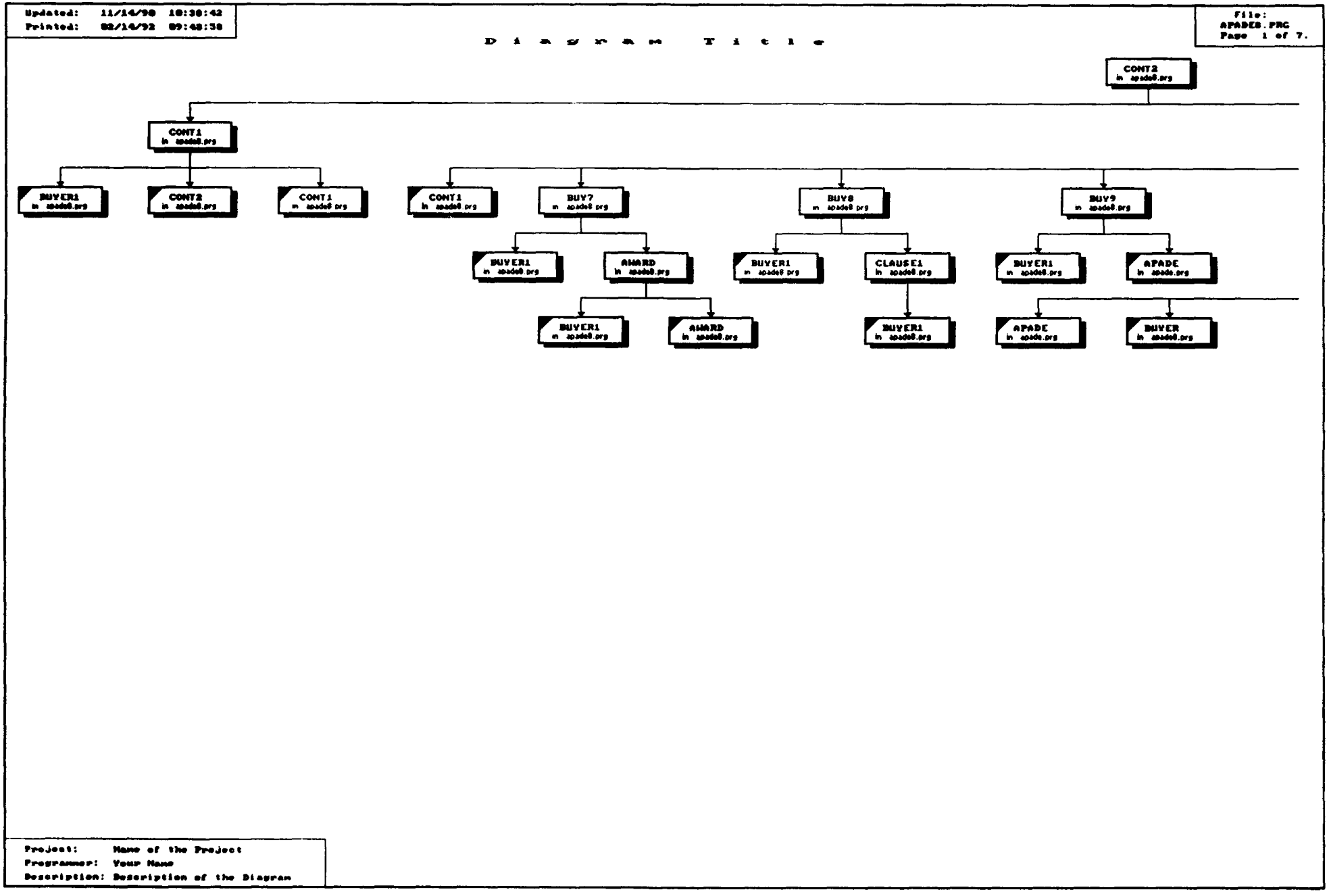
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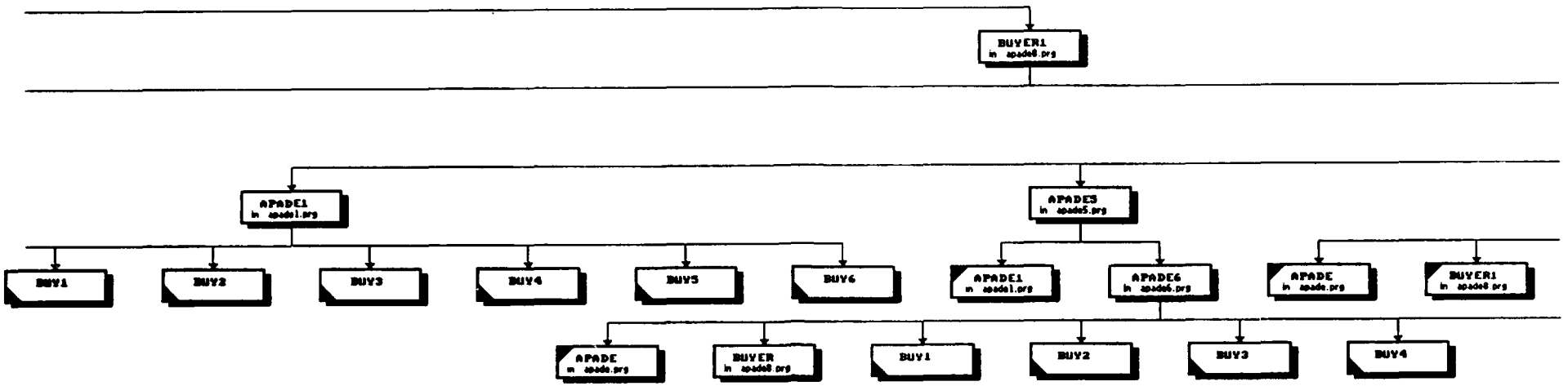
Programmer: Your Name
Description: Description of the Diagram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APADE1
in apade1.prg
APADE5
in apade5.prg
BUY1
BUY2
BUY3
BUY4
BUY5
BUY6
APADE1
in apade1.prg
APADE6
in apade6.prg
APADE
in apade.prg
BUYER1
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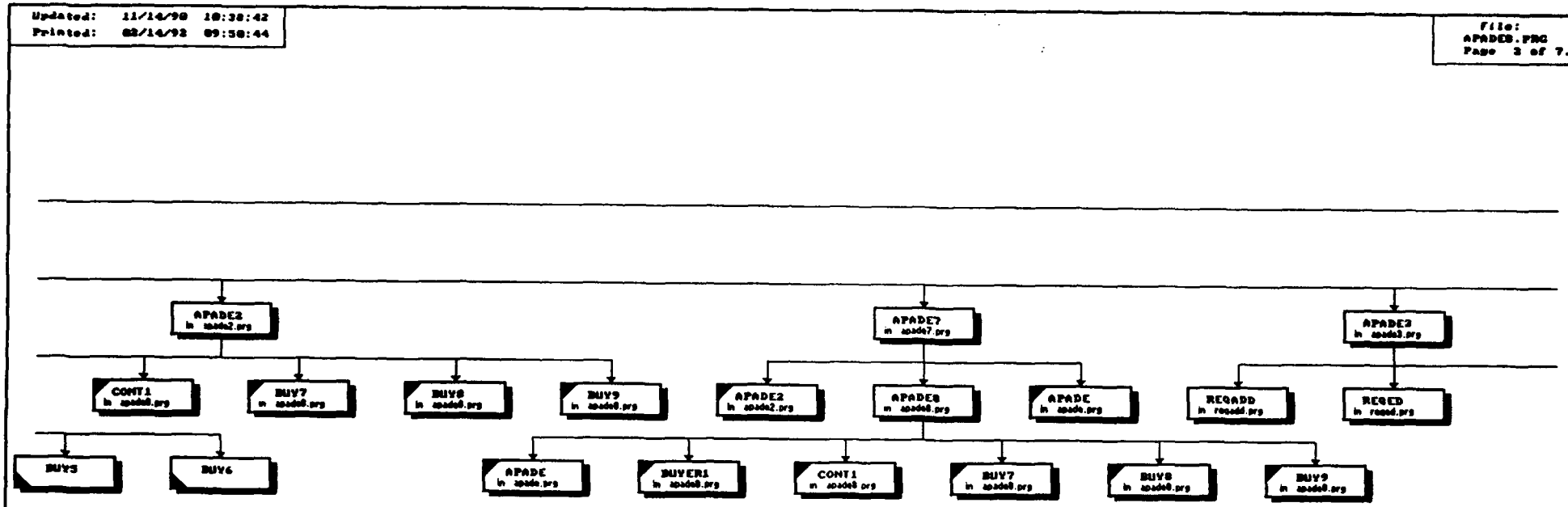
in apade.prg
BUYER
in apade8.prg
BUY1
BUY2
BUY3
BUY4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BUY8
BUY9
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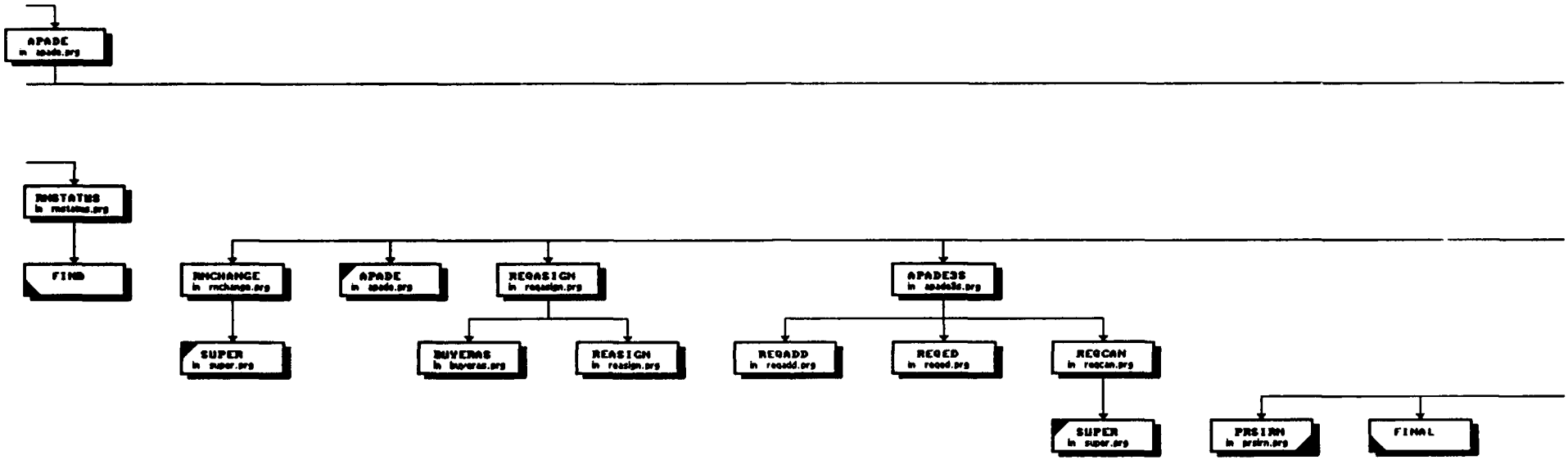
BUY9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in rnchange.prg
SUPER
in super.prg
APADE
in apade.prg
REASIGN
in reasign.prg
BUYERAS
in buyeras.prg
REASIGN
in reasign.prg
APADE3S
in apade3s.prg
REGADD
in regadd.prg
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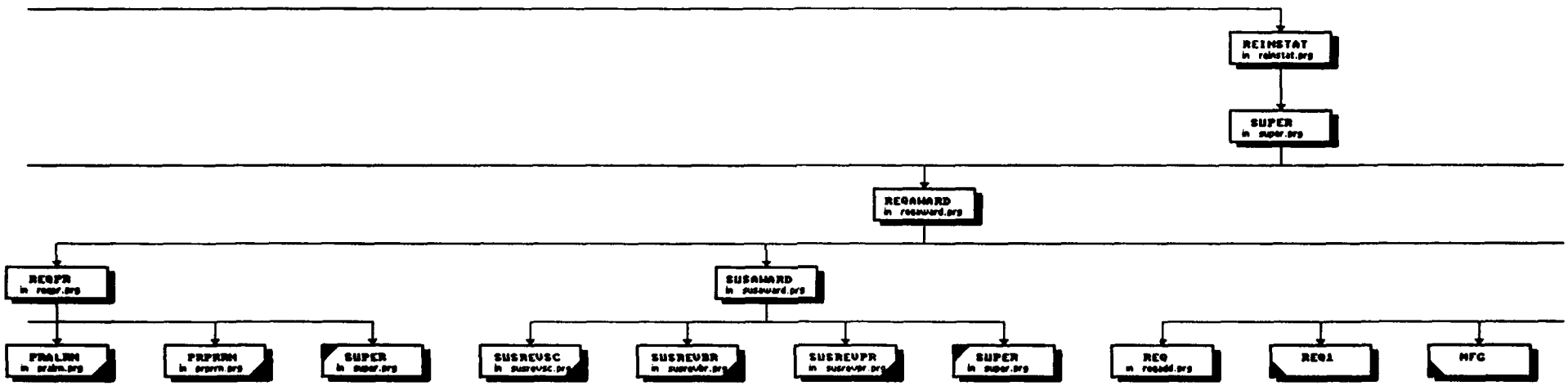
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REQPR
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SUSAWARD
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FRALRM
in fralrm.prg
PRPRRM
in prprrm.prg
SUPER
in super.prg
SUSREVSC
in susrevsc.prg
SUSREVBR
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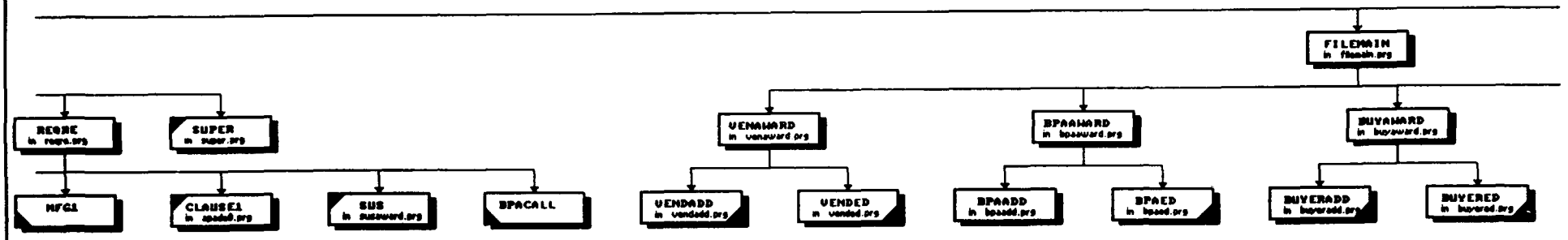
REQ1
MFG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SUPER
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VENAWARD
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BPAAWARD
in bpaaward.prg
BUYAWARD
in buyaward.prg
MFG1
CLAUSE1
in apade8.prg
SUS
in susaward.prg
BPACALL
VENDADD
in vendadd.prg
VENDED
in vended.prg
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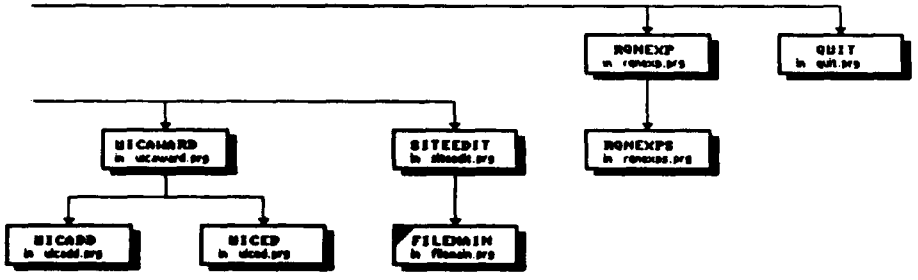


L E G E N D

Corresponding file is missing.
Submodules are unknown.

Limitation on number of levels.
Submodules are not shown.

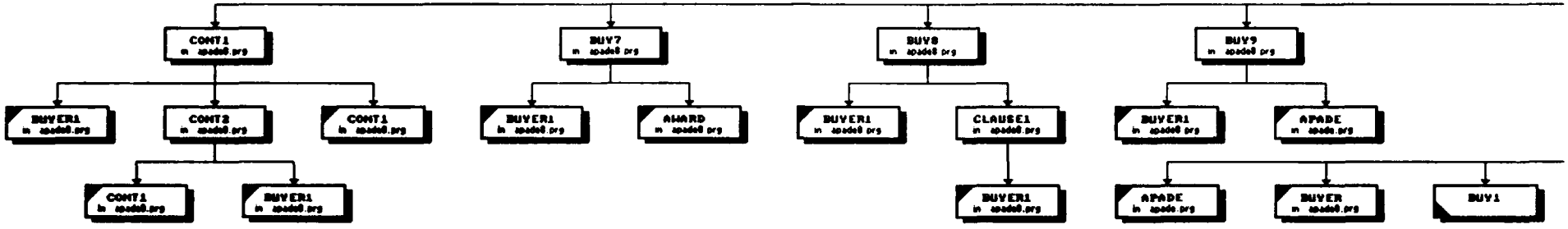
Decomposition is already shown
at one of the previous levels.

File specification error.
Decomposition impossible.

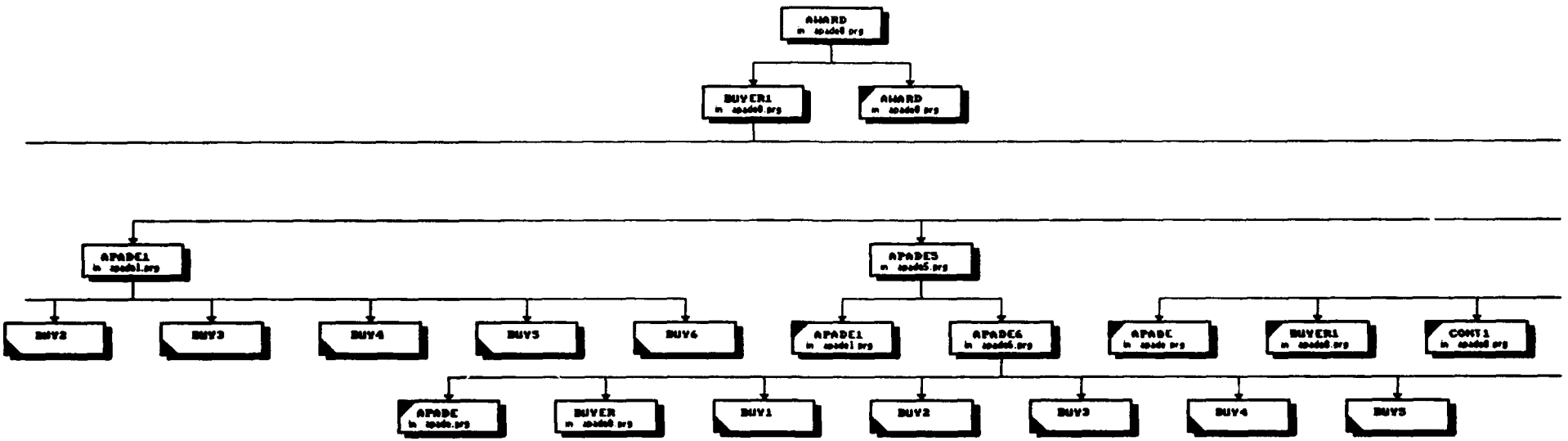
Updated: 11/14/98 10:38:42
Printed: 02/14/92 10:01:22

File:
APADE8.PRG
Page 1 of 7.

Diagram Title



Project: Name of the Project
Programmer: Your Name
Description: Description of the Diagram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AWARD
in apade8.prg
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in apade1.prg
APADE5
in apade5.prg
BUY2
BUY3
BUY4
BUY5
BUY6
APADE1
in apade1.prg
APADE6
in apade6.prg
APADE
in apade.prg
BUYER1
in apade8.prg
CONT1
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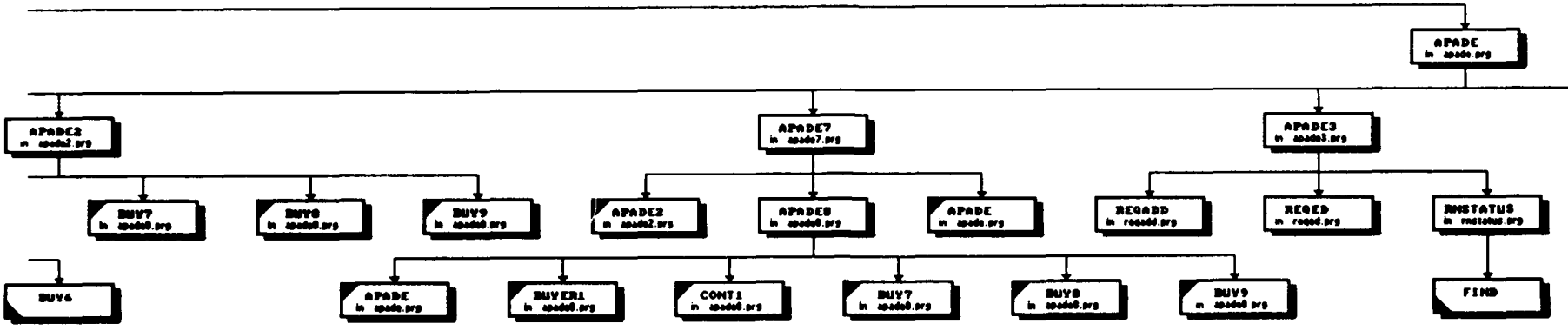
BUY1
BUY2
BUY3
BUY4
BUY5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APADE2
in apade2.prg
APADE7
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APADE3
in apade3.prg
BUY7
in apade8.prg
BUY8
in apade8.prg
BUY9
in apade8.prg
APADE2
in apade2.prg
APADE8
in apade8.prg
APADE
in apade.prg
RECADD
in recadd.prg
RECED
in reced.prg
RMSTATUS
in rmstatus.prg
BUY6
APADE
in apade.prg
BUYER1
in apade8.prg
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BUY7
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BUY8
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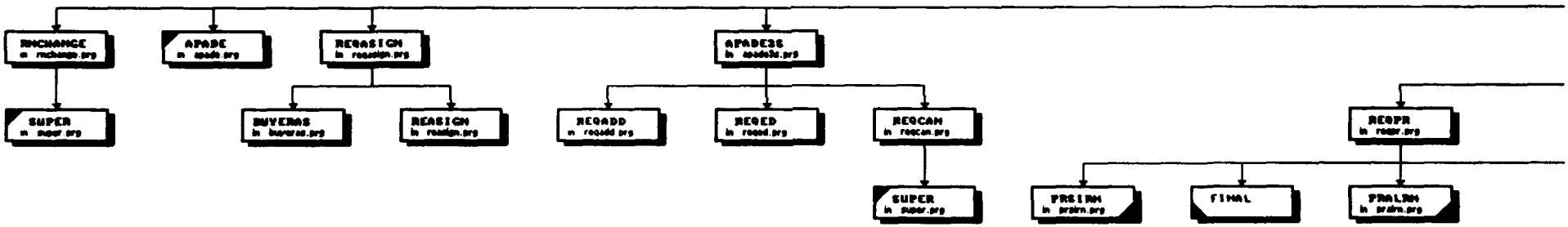
in apade8.prg
FIND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APADE
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REQASIGN
in reqasign.prg
APADE3S
in apade3s.prg
SUPER
m super.prg
BWVERAS
in bwveras.prg
REASIGN
in reasign.prg
REQADD
m reqadd.prg
REQED
in reqed.prg
REQCAN
in reqcan.prg
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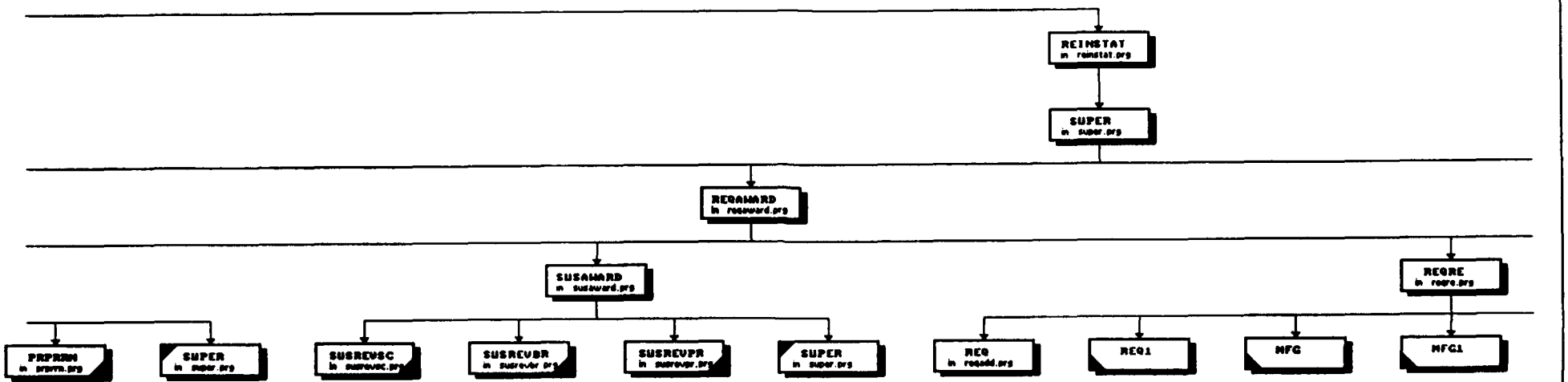
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SUSAWARD
in susaward.prg
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PRPRRM
in prprrm.prg
SUPER
in super.prg
SUSREVSC
in susrevsc.prg
SUSREVBR
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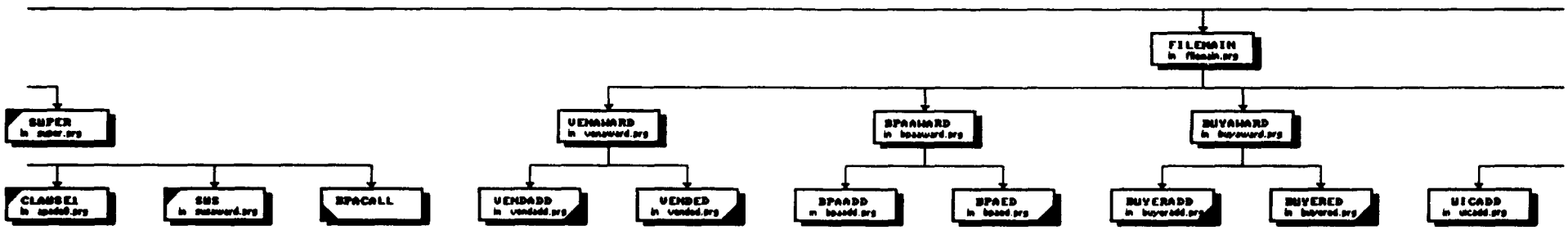
MFG
MFG1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BPAAWARD
in bpaaward.prg
BUYAWARD
in buyaward.prg
CLASSE1
in apade0.prg
SUS
in suaward.prg
BPACALL
VENDADD
in vendadd.prg
VENDED
in vended.prg
BPAADD
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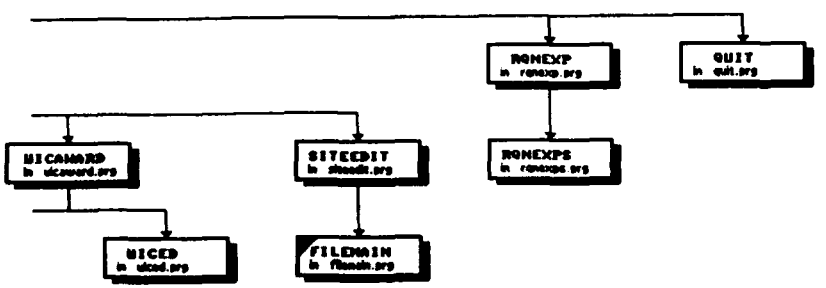


L E G E N D

Corresponding file is missing.
Submodules are unknown.

Limitation on number of levels.
Submodules are not shown.

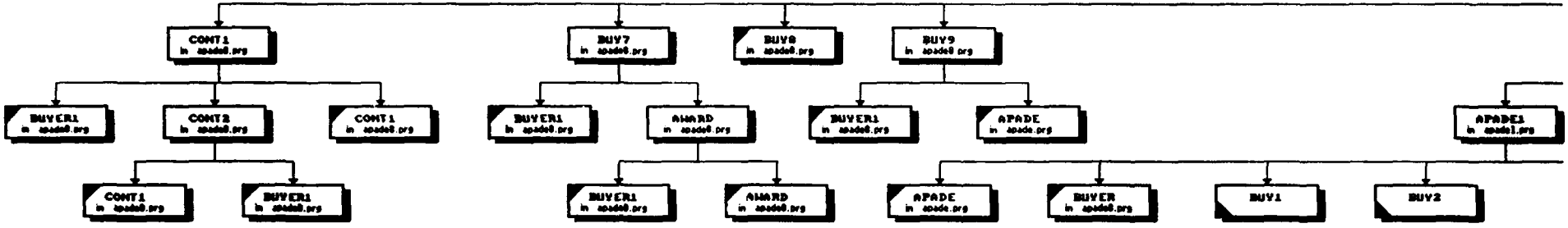
Decomposition is already shown
at one of the previous levels.

File specification error.
Decomposition impossible.

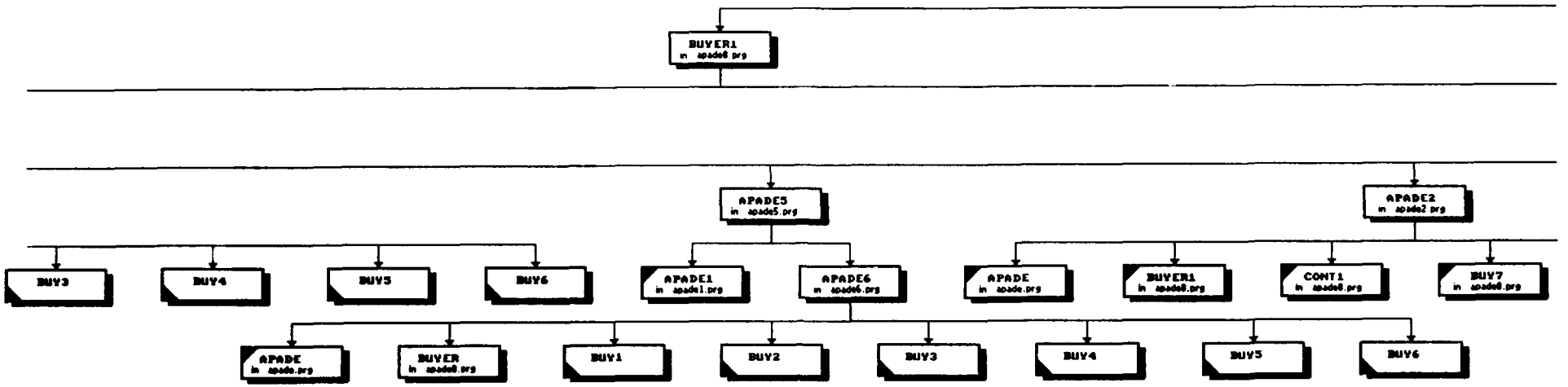
Updated: 11/14/90 10:38:42
Printed: 02/14/92 10:08:27

File:
APADE8.PRG
Page 1 of 7.

Diagram Title



Project: Name of the Project
Programmer: Your Name
Description: Description of the Diagram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in apade2.prg
BUY3
BUY4
BUY5
BUY6
APADE1
in apade1.prg
APADE6
in apade6.prg
APADE
in apade.prg
BUYER1
in apade8.prg
CONT1
in apade8.prg
BUY7
in apade8.prg
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BUYER
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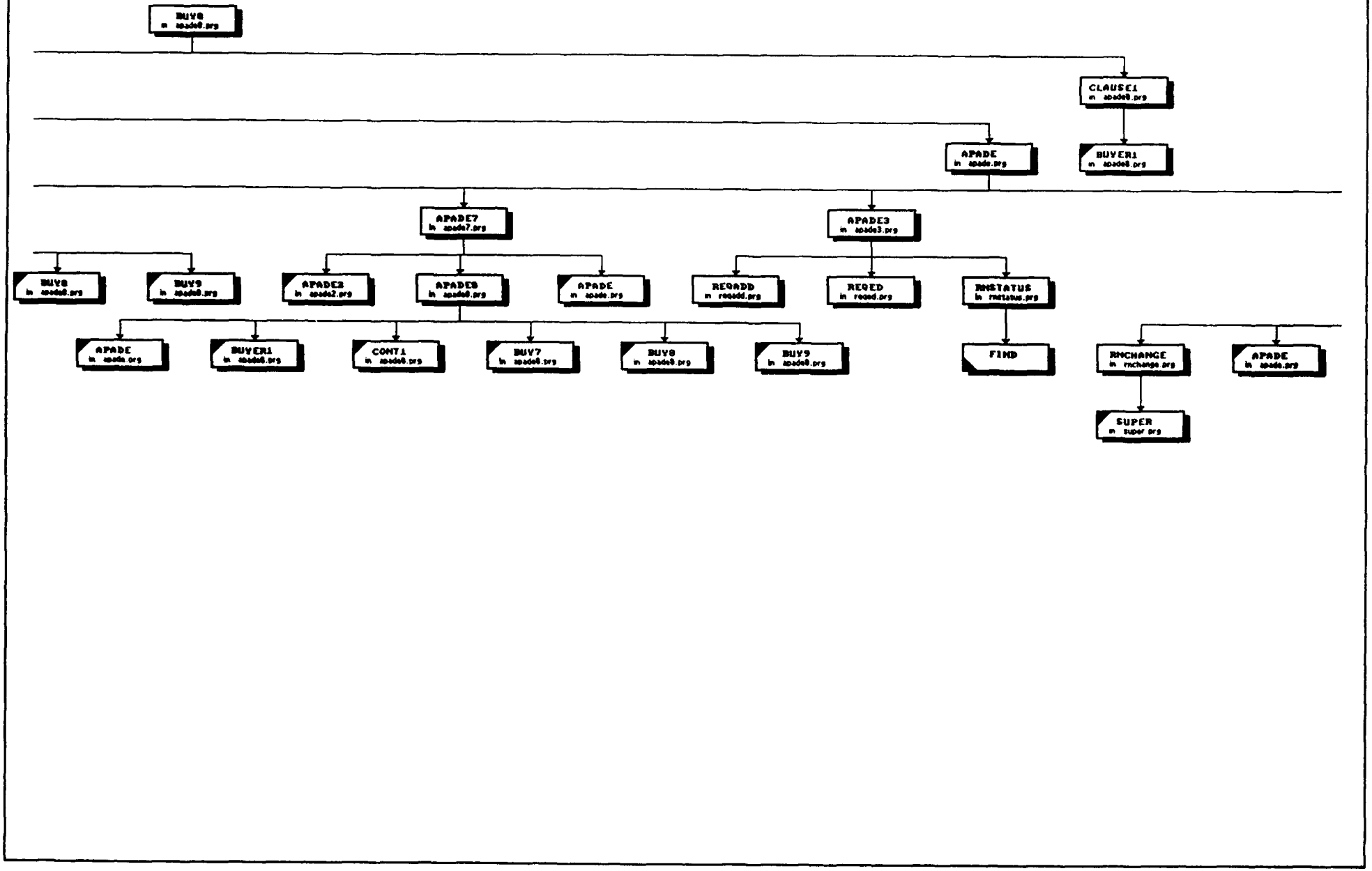
BUY1
BUY2
BUY3
BUY4
BUY5
BUY6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APADE3
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BUY8
in apade8.prg
BUY9
in apade8.prg
APADE2
in apade2.prg
APADE8
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BUYER1
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CONT1
in apade8.prg
BUY7
in apade8.prg
BUY8
in apade8.prg
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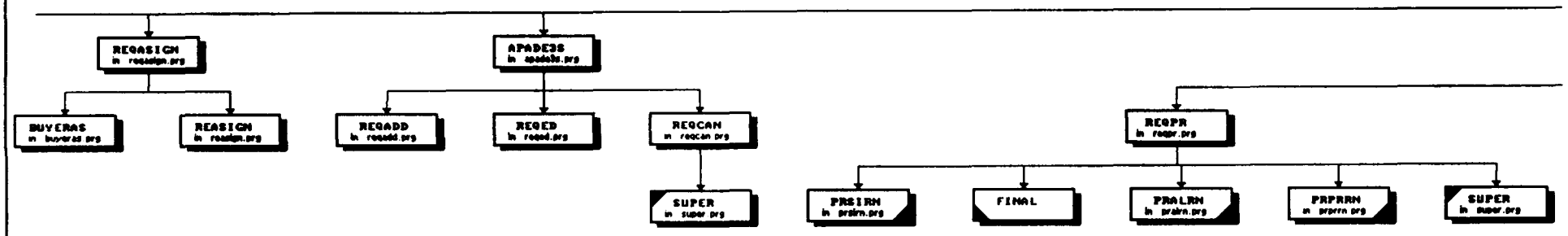
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REQED
in reqed.prg
REQCAN
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SUPER
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REQPR
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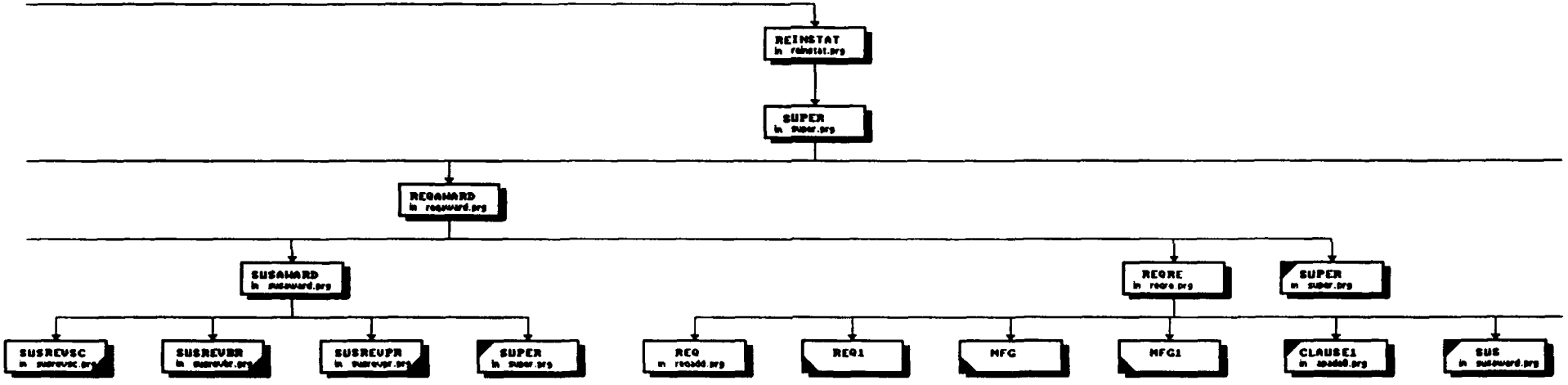
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SUSREVBR
in susrevbr.prg
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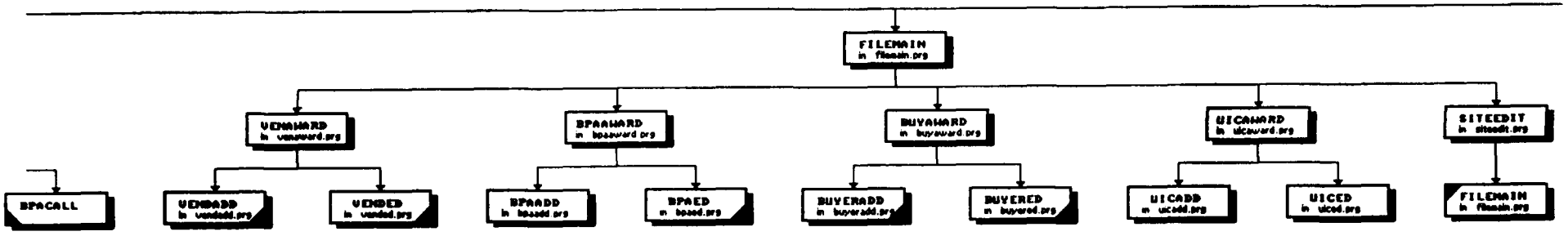
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BPACALL
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VENED
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BPAADD
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BPAED
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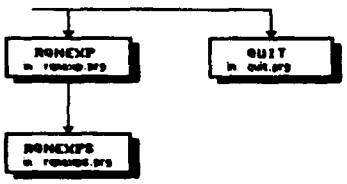

L E G E N D

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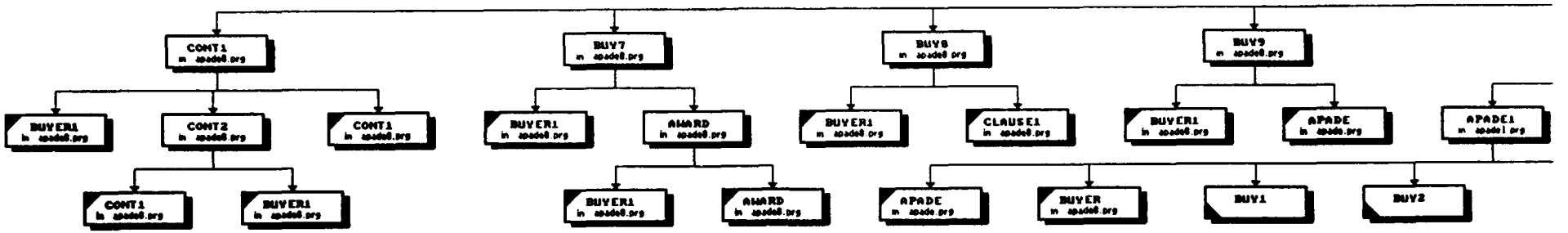
Limitation on number of levels.
Submodules are not shown.

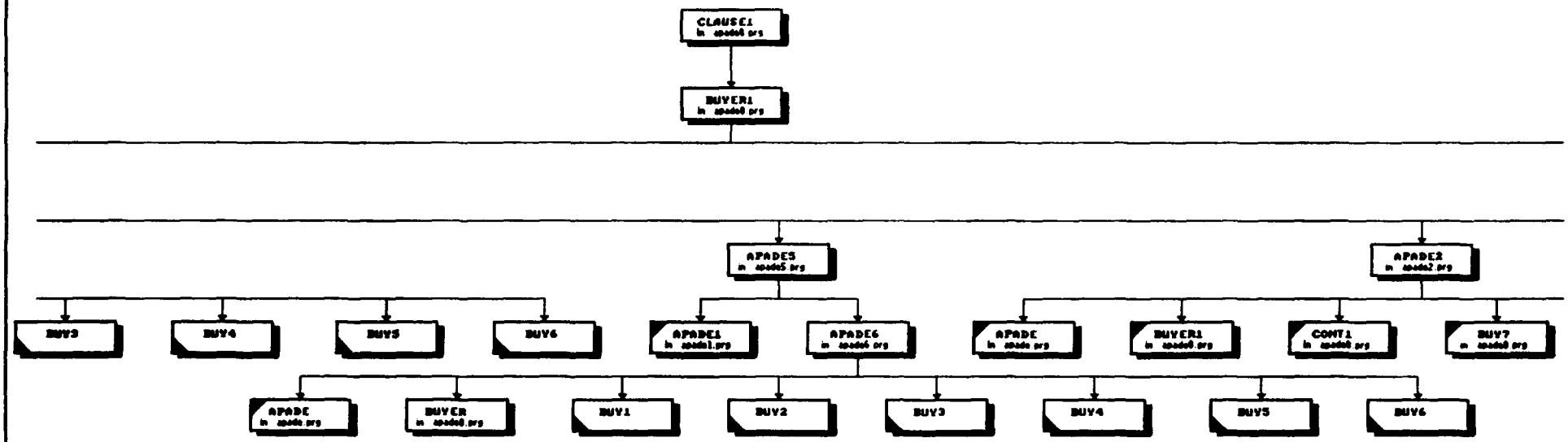
Decomposition is already shown
at one of the previous levels.

File specification error.
Decomposition impossible.

Diagram Title



Project: Name of the Project
Programmer: Your Name
Description: Description of the Diagram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APADE5
APADE2
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BUY4
BUY5
BUY6
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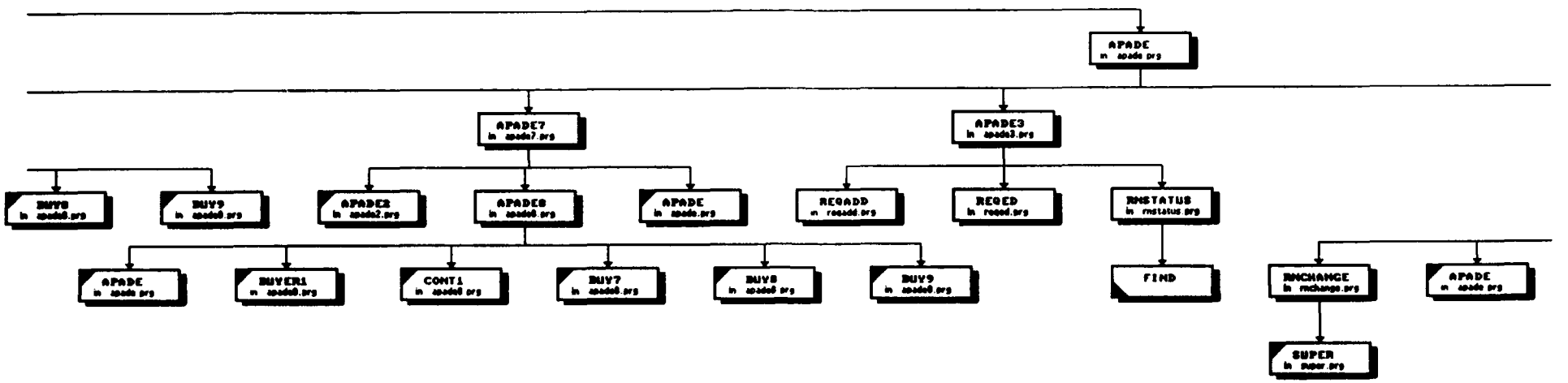
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APADE3
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BUY9
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APADE2
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APADE8
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RCOED
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RMSTATUS
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BUYER1
in apade8.prg
CONT1
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BUY8
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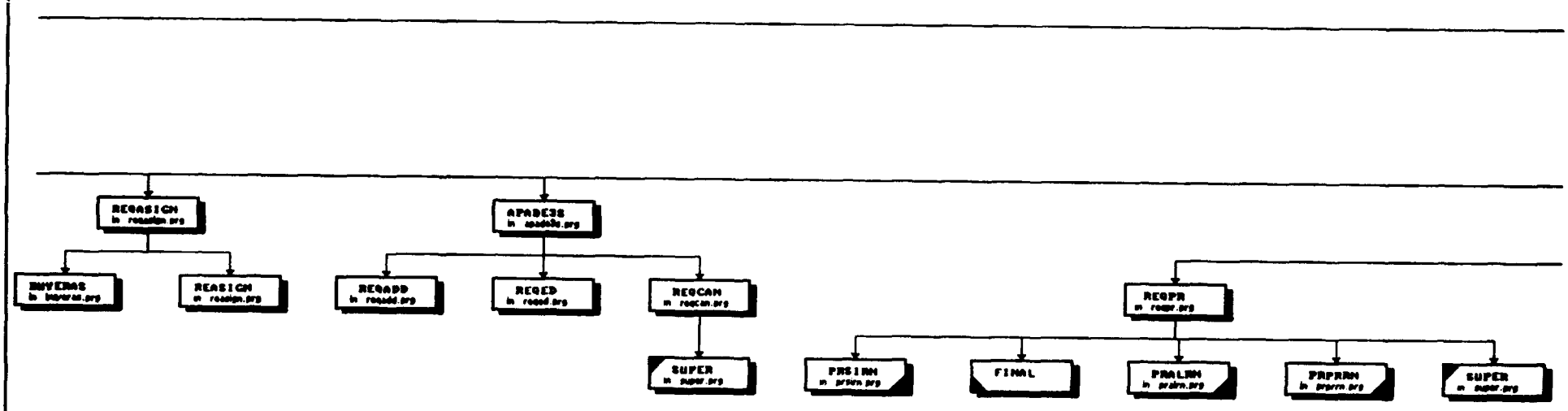
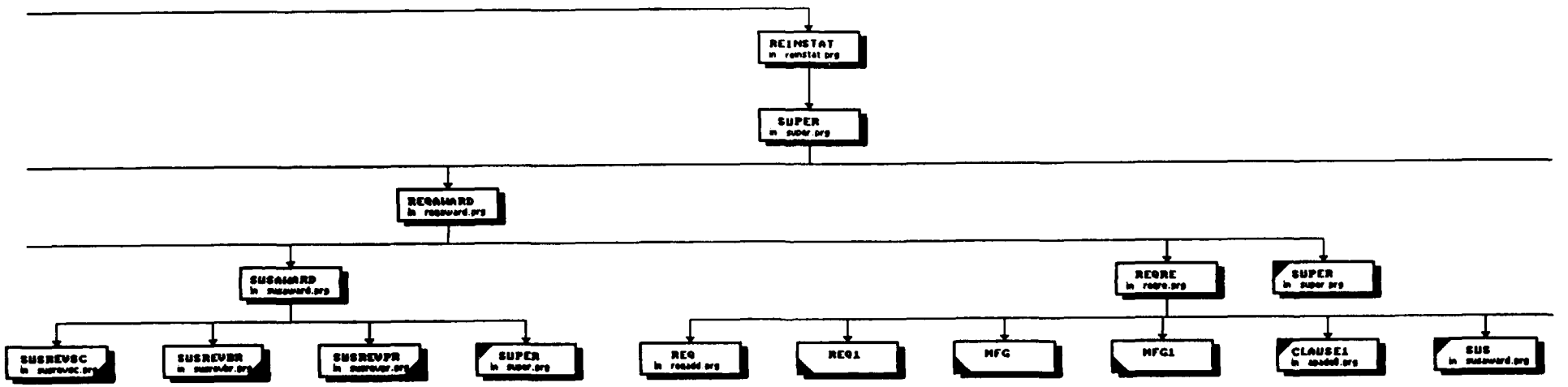
Updated: 11/14/90 10:38:42
Printed: 02/14/92 10:10:10

File:
APADES.PRG
Page 4 of 7.

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SUSAWARD
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REQRE
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SUPER
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SUSREVSC
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SUSREVBR
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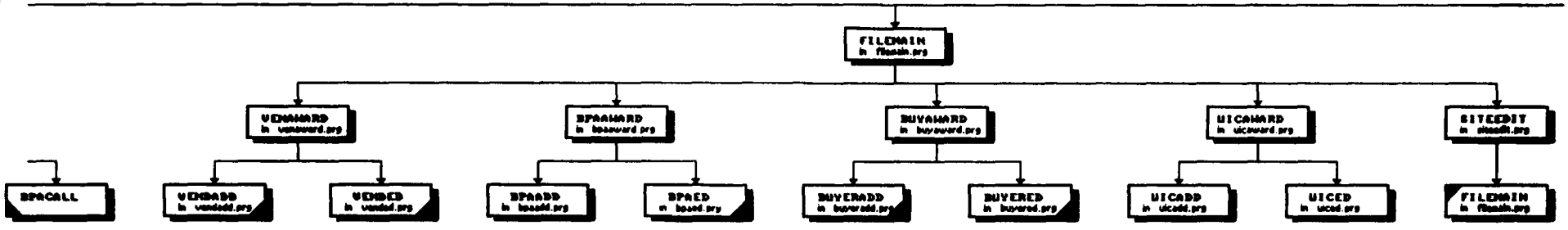
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SPAAWARD
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BUYAWARD
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UICAWARD
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SITEEDIT
in siteedit.prg
SPACALL
VENADD
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VENED
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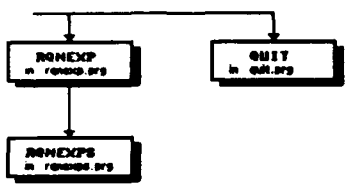

L E G E N D

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Submodules are unknown.

Limitation on number of levels.
Submodules are not shown.

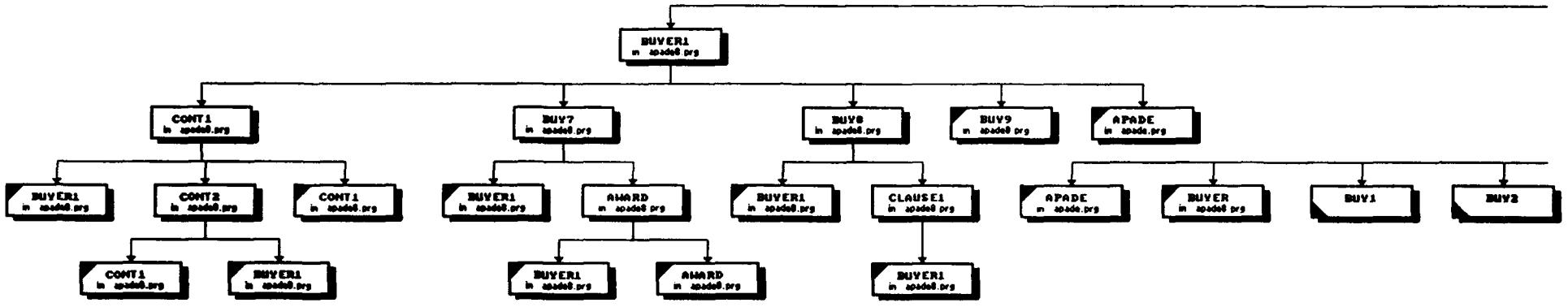
Decomposition is already shown
at one of the previous levels.

File specification error.
Decomposition impossible.

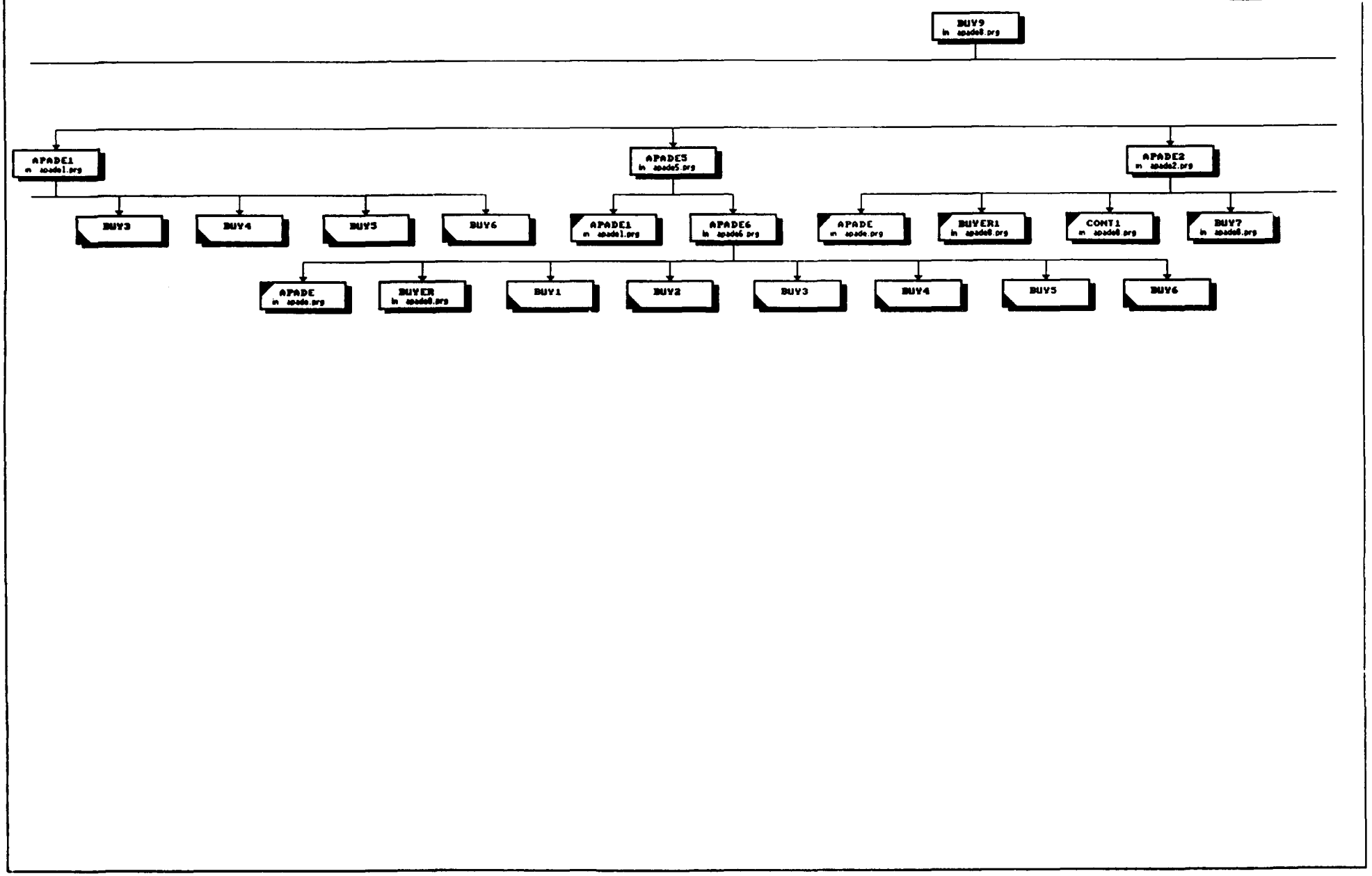
Updated: 11/14/98 10:38:42
Printed: 02/14/92 10:22:38

File:
APADE8.PRG
Page 1 of 8.

Diagram Title



Project: Name of the Project
Programmer: Your Name
Description: Description of the Diagram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BUY3
BUY4
BUY5
BUY6
APADE1
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APADE
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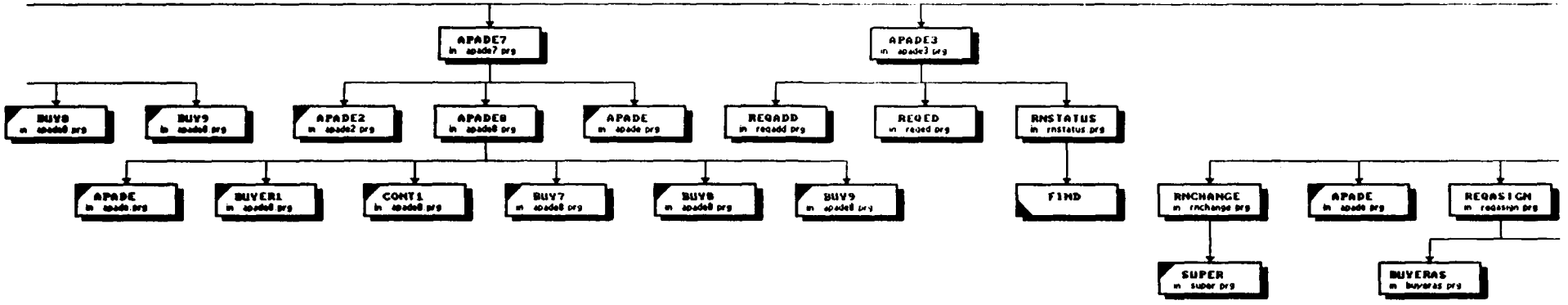
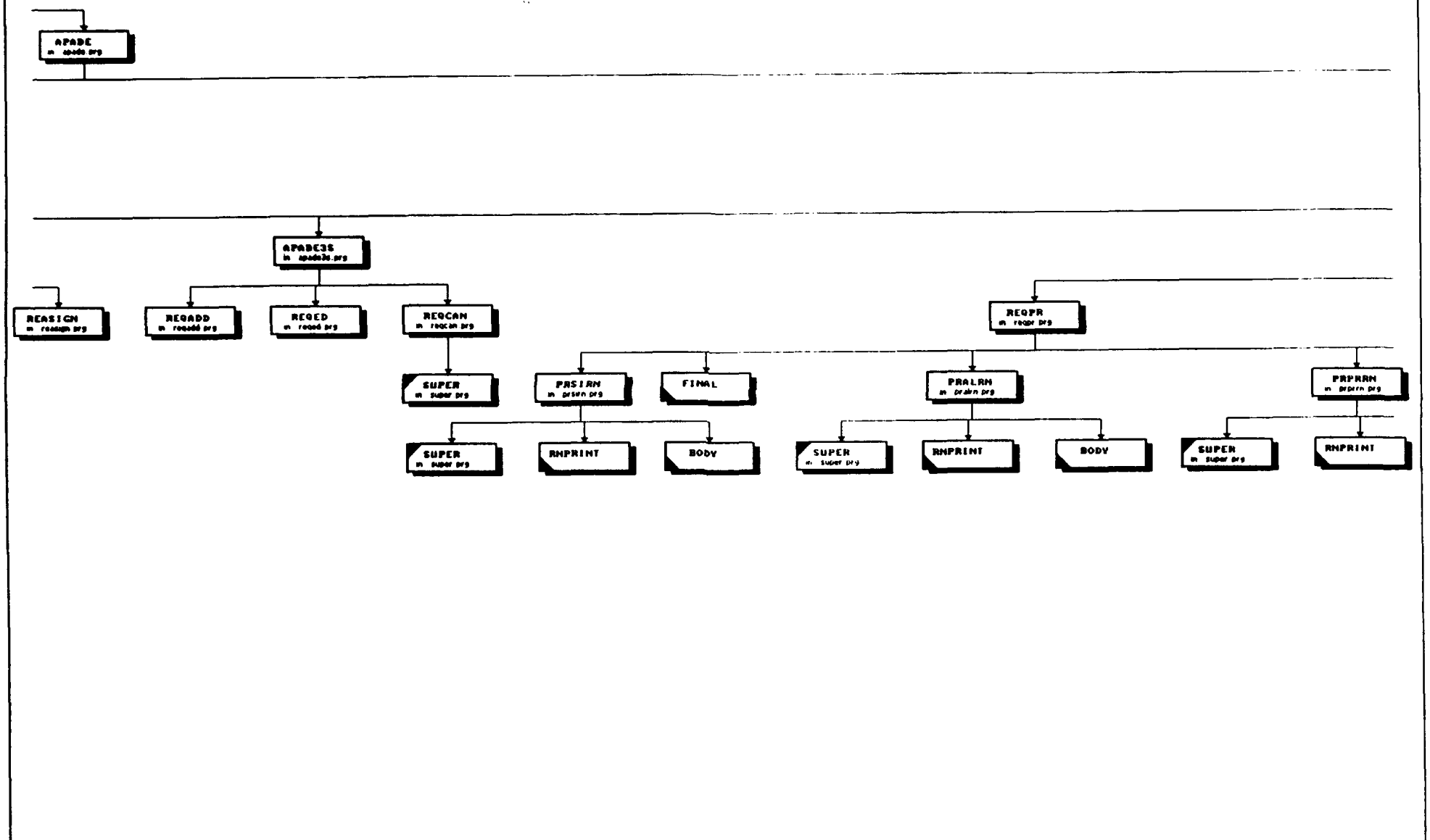
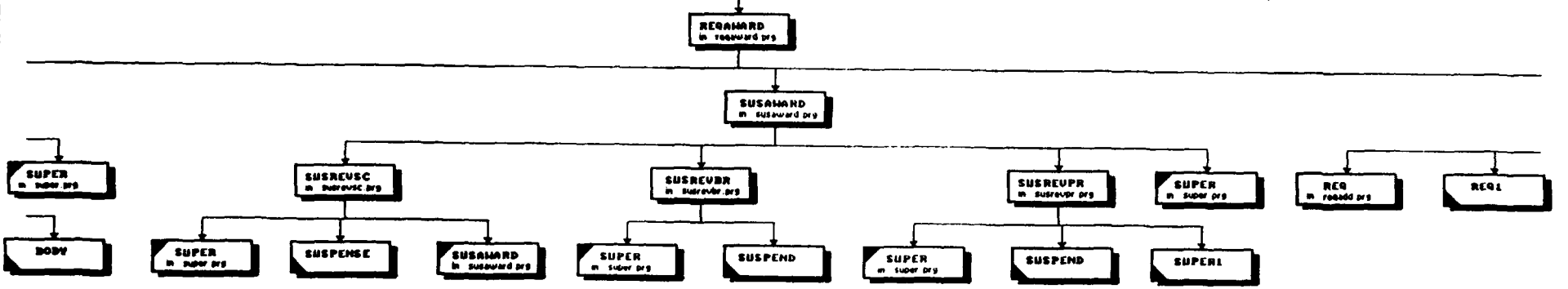
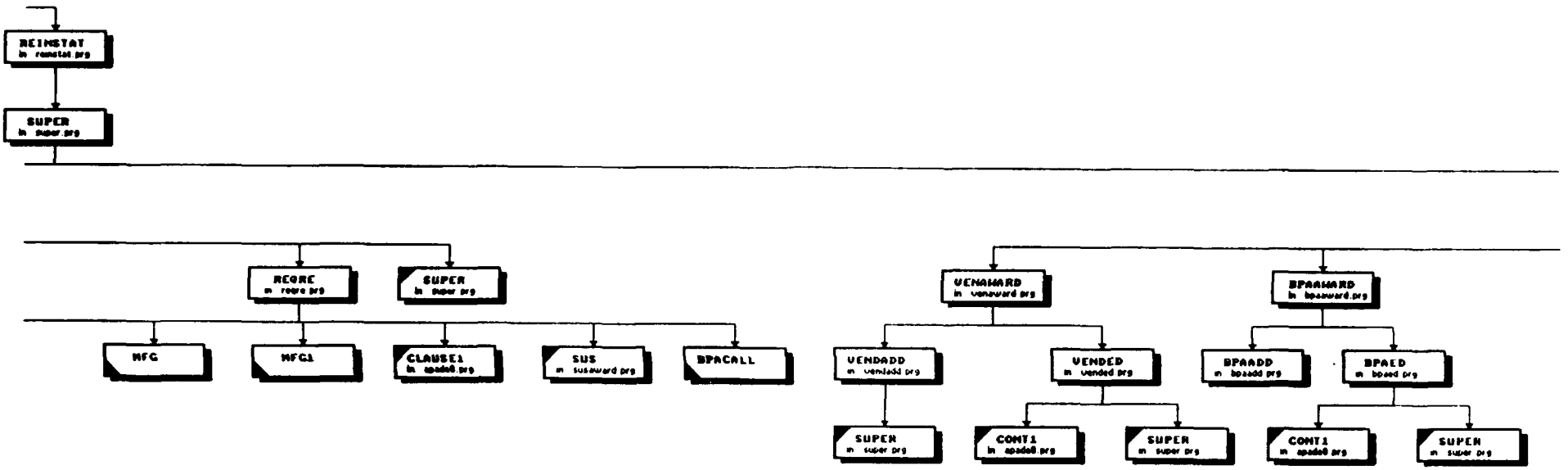
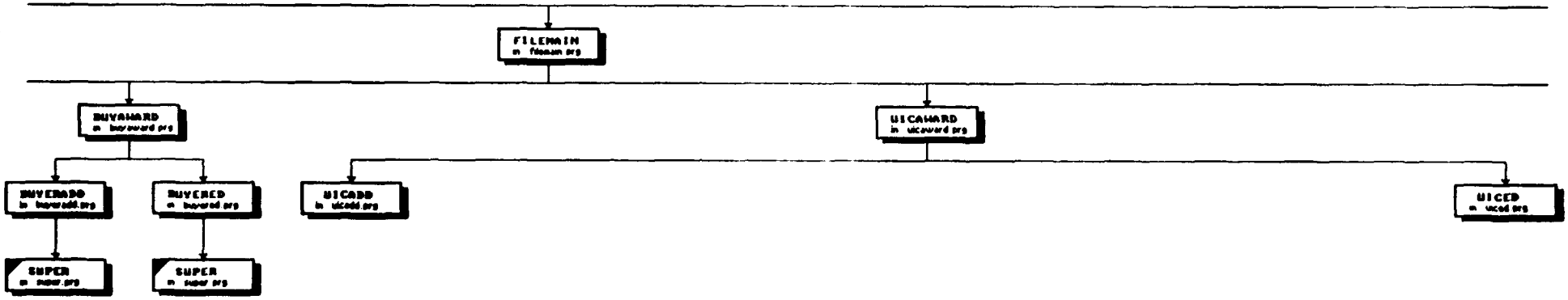
BUYER1
in apade8.prg
CONT1
in apade8.prg
BUY7
in apade8.prg
APADE
in apade.prg
BUYER
in apade8.prg
BUY1
BUY2
BUY3
BUY4
BUY5
BUY6

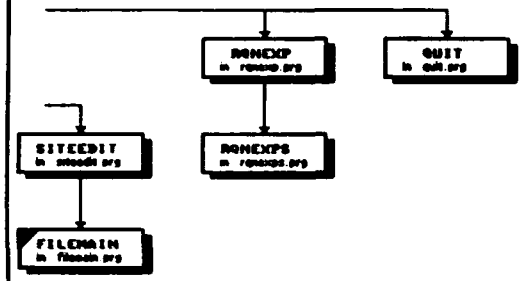

APADE7
in apade7 prg
APADE3
in apade3 prg
BUY8
in apade8 prg
BUY9
in apade8 prg
APADE2
in apade2 prg
APADE8
in apade8 prg
APADE
in apade prg
REQADD
in reqadd prg
REQED
in reqed prg
RNSTATUS
in rnstatus prg
APADE
in apade prg
BUYER1
in apade8 prg
CONT1
in apade8 prg
BUY7
in apade8 prg
BUY8
in apade8 prg
BUY9
in apade8 prg
FIND
RNCHANGE
in rnchange prg
APADE
in apade prg
REQASIGN
in reqasign prg
SUPER
in super prg
BUYERAS
in buyeras prg


APADE
in apade.prg
APADE3S
in apade3s.prg
REASIGN
in reasign.prg
REQADD
in reqadd.prg
REQED
in reqed.prg
REQCAN
in reqcan.prg
SUPER
in super.prg
PASIRM
in pasirn.prg
FINAL
SUPER
in super.prg
RMPRINT
BODY
REQPR
in reqpr.prg
PRALRM
in pralrm.prg
SUPER
in super.prg
RMPRINT
BODY
PRPRRM
in prprrn.prg
SUPER
in super.prg
RMPRINT


REQAWARD
in reqaward prg
SUSAWARD
in susaward prg
SUPER
in super prg
BODY
SUSREVSC
in susrevsc prg
SUPER
in super prg
SUSPENSE
SUSAWARD
in susaward prg
SUSREVBR
in susrevbr prg
SUPER
in super prg
SUSPEND
SUSREVPR
in susrevpr prg
SUPER
in super prg
SUSPEND
SUPER
in super prg
REQ
in reqadd prg
REQ1


REINSTAT
in reinstat prg
SUPER
in super prg
REGRC
in regrc prg
SUPER
in super prg
MFG
MFG1
CLAUSE1
in apadeb prg
SUS
in susaward prg
BPACALL
VENAWARD
in venaward prg
VENDADD
in vendadd prg
VENDED
in vended prg
SUPER
in super prg
CONT1
in apadeb prg
SUPER
in super prg
BPAAWARD
in bpaaward prg
BPAADD
in bpaadd prg
BPAED
in bpaed prg
CONT1
in apadeb prg
SUPER
in super prg


FILEMAIN
in filemain.prg
BUYAWARD
in buyaward.prg
UICAWARD
in uicaward.prg
BUYEWADD
in buyewadd.prg
BUYEWED
in buyewed.prg
UICADD
in uicadd.prg
UICED
in uiced.prg
SUPER
in super.prg
SUPER
in super.prg



L E G E N D

Corresponding file is missing.
Submodules are unknown.

Limitation on number of levels.
Submodules are not shown.

Decomposition is already shown
at one of the previous levels.

File specification error.
Decomposition impossible.

APPENDIX C

APADE JR. DATABASE FILE STRUCTURE

Structure for database : BPA.DBF Alias: F
Number of data records : 1
Last updated : 08/30/91 at 16:15

Field	Field name	Type	Width	Dec	Start	End
1	FSCM	Character	4		1	4
2	NIIN	Character	9		5	13
3	BPA_NR1	Character	2		14	15
4	BPA_NR2	Character	4		16	19
5	DATE_OF_KT	Numeric	4		20	23
6	VENDOR	Character	5		24	28
7	VENDOR_SIZ	Numeric	1		29	29
8	PROD_LEADT	Numeric	3		30	32
9	K_SIZE	Numeric	1		33	33
10	MFG_NAME	Character	30		34	63
11	CAGE	Character	5		64	68
12	MFG_ADD1	Character	30		69	98
13	MFG_ADD2	Character	30		99	128
14	MFG_ADD3	Character	30		129	158
15	CITY	Character	25		159	183
16	STATE	Character	2		184	185
17	ZIP1	Character	5		186	190
18	ZIP2	Character	4		191	194
19	SPAW_PHON1	Numeric	3		195	197
20	SPAW_PHON2	Numeric	3		198	200
21	SPAW_PHON3	Numeric	4		201	204
22	CONTA	Character	30		205	234
23	USE	Character	1		235	235
24	BPA	Character	1		236	236
25	BOX	Character	1		237	237
** Total **			238			

FoxDoc did not find any associated index files
This database appears to be associated with multiple index file(s):
: C:\APADE\BPA.MDX
Used by: APADE1.PRG
: APADE6.PRG
: BPAADD.PRG
: BPAED.PRG

Structure for database : BPACALL.DBF Alias: E
Number of data records : 0
Last updated : 08/30/91 at 10:38

Field	Field name	Type	Width	Dec	Start	End
1	BPA1	Character	2		1	2
2	BPA2	Character	4		3	6
3	VENDOR	Character	5		7	11
4	VENDOR_SIZ	Numeric	1		12	12
5	MFG_NAME	Character	30		13	42
6	MFG_ADD1	Character	30		43	72
7	MFG_ADD2	Character	30		73	102
8	MFG_ADD3	Character	30		103	132
9	CITY	Character	25		133	157
10	STATE	Character	2		158	159
11	ZIP1	Character	5		160	164
12	ZIP2	Character	4		165	168
13	SPAW_PHON1	Numeric	3		169	171
14	SPAW_PHON2	Numeric	3		172	174
15	SPAW_PHON3	Numeric	4		175	178
16	CONTA	Character	30		179	208
17	DATE_CALL	Date	8		209	216
18	DATE_AWARD	Date	8		217	224
19	RN	Character	15		225	239
20	TPRICE	Numeric	8	2	240	247
21	BUYER_CODE	Character	3		248	250
22	DATE_OF_KT	Numeric	4		251	254
23	K_SIZE	Numeric	1		255	255
24	CONTRA_NR	Character	17		256	272
25	PRNR1	Character	5		273	277
26	PRNR2	Character	4		278	281
** Total **			282			

FoxDoc did not find any associated index files
This database appears to be associated with multiple index file(s):
: C:\APADE\BPACALL.MDX
Used by: RNCHANGE.PRG
: APADE2.PRG
: APADE8.PRG
: BPACALL (procedure in C:\APADE\REQRE.PRG)

```
Structure for database : CLAUSE.DBF       Alias: G
Number of data records :          6
         Last updated : 09/04/91 at  8:36
Field  Field name  Type        Width    Dec    Start      End
    1  CLAUSE_ID   Character       6                1        6
    2  CLAUSE_TIT  Character      50                7       56
    3  STANDARD    Character       1               57       57
    4  OPTIONAL    Character       1               58       58
    5  DATE        Date            8               59       66
** Total **                       67
This database appears to be associated with index file(s):
       : C:\APADE\CLAUSE_ID.NDX  (CLAUSE_ID)
This database appears to be associated with multiple index file(s):
       : C:\APADE\CLAUSE.MDX
Used by: APADE2.PRG
       : APADE8.PRG
```

```
Structure for database : CLAUSE1.DBF       Alias: H
Number of data records :       102
         Last updated : 09/04/91 at  8:36
Field  Field name  Type        Width    Dec    Start      End
    1  CLAUSE_ID   Character       6                1        6
    2  RN          Character      15                7       21
    3  DATE_CLAUS  Date            8               22       29
    4  ENTRY1      Character      15               30       44
    5  ENTRY2      Character      15               45       59
    6  ENTRY3      Character      15               60       74
    7  ENTRY4      Character      15               75       89
    8  ENTRY5      Character      15               90      104
** Total **                      105
FoxDoc did not find any associated index files
FoxDoc did not find any associated multiple indexes
Used by: RNCHANGE.PRG
       : APADE2.PRG
       : CLAUSE1                    (procedure in C:\APADE\APADE2.PRG)
       : APADE8.PRG
       : PRSIRN.PRG
       : PRALRN.PRG
       : PRPRRN.PRG
```

Structure for database : CONT.DBF Alias: G
Number of data records : 0
Last updated : 10/07/91 at 18:21

Field	Field name	Type	Width	Dec	Start	End
1	FSCM	Character	4		1	4
2	NIIN	Character	9		5	13
3	BPA_NR1	Character	2		14	15
4	BPA_NR2	Character	4		16	19
5	NOMENCLATU	Character	50		20	69
6	DATE_OF_KT	Numeric	4		70	73
7	VENDOR	Character	5		74	78
8	VENDOR_SIZ	Numeric	1		79	79
9	PROD_LEADT	Numeric	3		80	82
10	K_SIZE	Numeric	1		83	83
11	MFG_NAME	Character	30		84	113
12	CAGEB	Character	5		114	118
13	MFG_ADD1	Character	30		119	148
14	MFG_ADD2	Character	30		149	178
15	MFG_ADD3	Character	30		179	208
16	CITY	Character	25		209	233
17	STATE	Character	2		234	235
18	ZIP1	Character	5		236	240
19	ZIP2	Character	4		241	244
20	SPAW_PHON1	Numeric	3		245	247
21	SPAW_PHON2	Numeric	3		248	250
22	SPAW_PHON3	Numeric	4		251	254
23	CONTA	Character	30		255	284
24	USE	Character	1		285	285
25	BPA	Character	1		286	286
26	BOX	Character	1		287	287
** Total **			288			

FoxDoc did not find any associated index files
This database appears to be associated with multiple index file(s):
: C:\APADE\CONT.MDX
Used by: APADE1.PRG
: APADE6.PRG
: VENDADD.PRG
: VENDED.PRG

Structure for database : DATADBF.DBF Alias: A
Number of data records : 1
Last updated : 09/04/91 at 8:29

Field	Field name	Type	Width	Dec	Start	End
1	SER	Numeric	4		1	4
2	JULIANDATE	Numeric	4		5	8
** Total **			9			

FoxDoc did not find any associated index files
FoxDoc did not find any associated multiple indexes
Used by: BUYERAS.PRG

Structure for database : MFG.DBF Alias: C
Number of data records : 0
Last updated : 10/07/91 at 18:27

Field	Field name	Type	Width	Dec	Start	End
1	RN	Character	15		1	15
2	LINEITNR	Numeric	3		16	18
3	T_RN	Character	18		19	36
4	STKNR1	Character	13		37	49
5	PNCN1	Character	32		50	81
6	REF_NR	Character	32		82	113
7	CONTRA_NR	Character	17		114	130
8	DATE_OF_KT	Numeric	4		131	134
9	VENDOR	Character	5		135	139
10	VENDOR_SIZ	Numeric	1		140	140
11	QUANTITY	Numeric	5		141	145
12	UNIT_ISSUE	Character	2		146	147
13	CUST_UIC	Character	6		148	153
14	NOMENCLATU	Character	50		154	203
15	UNIT_PRICE	Numeric	8	2	204	211
16	PROD_LEADT	Numeric	3		212	214
17	K_SIZE	Numeric	1		215	215
18	MFG_NAME	Character	30		216	245
19	MFG_PARTNR	Character	32		246	277
20	CAGEA	Character	5		278	282
21	MFG_ADD1	Character	30		283	312
22	MFG_ADD2	Character	30		313	342
23	MFG_ADD3	Character	30		343	372
24	CITY	Character	25		373	397
25	STATE	Character	2		398	399
26	ZIP1	Character	5		400	404
27	ZIP2	Character	4		405	408
28	SPAW_PHON1	Numeric	3		409	411
29	SPAW_PHON2	Numeric	3		412	414
30	SPAW_PHON3	Numeric	4		415	418
31	CONTA	Character	30		419	448
32	PR_NR1A	Numeric	5		449	453
33	PR_NR2A	Numeric	4		454	457
34	USE	Character	1		458	458
35	BPA	Character	1		459	459
36	BPA_NR1	Character	2		460	461
37	BPA_NR2	Character	4		462	465
38	DTCAL	Date	8		466	473
39	DTAWARD	Date	8		474	481
40	AWARD	Character	1		482	482
41	DTQUO	Date	8		483	490
42	OR_WR	Character	1		491	491
43	ACCEP	Character	1		492	492
44	MINQY	Character	7		493	499
45	UI	Character	2		500	501
46	SPECH	Character	15		502	516
47	QTYVA	Character	15		517	531
48	ESTAR	Date	8		532	539
49	SHIPM	Character	10		540	549
50	FOB	Character	10		550	559
51	DISC	Numeric	5	2	560	564
52	NET	Character	3		565	567
53	SM_MI	Character	10		568	577
54	SEREA	Character	15		578	592
55	QUANT	Numeric	5		593	597
56	PRICE	Numeric	8	2	598	605
57	TPRIC	Numeric	8	2	606	613
58	IDENT	Character	3		614	616
59	MFGLINK	Numeric	7		617	623
60	RESPON	Character	1		624	624

```
   61  REMARKS      Character       50                625       674
   62  QUOTEPRICE   Numeric          8         2       675       682
** Total **                        683
FoxDoc did not find any associated index files
This database appears to be associated with multiple index file(s):
       : C:\APADE\MFG.MDX
Used by: RNCHANGE.PRG
       : APADE1.PRG
       : APADE2.PRG
       : REQADD.PRG
       : APADE6.PRG
       : APADE8.PRG
       : PRSIRN.PRG
       : PRALRN.PRG
       : PRPRRN.PRG
       : MFG                          (procedure in C:\APADE\REQRE.PRG)
```

Structure for database : MFG1.DBF Alias: G
Number of data records : 0
Last updated : 10/07/91 at 18:28

Field	Field name	Type	Width	Dec	Start	End
1	RN	Character	15		1	15
2	LINEITNR	Numeric	3		16	18
3	T_RN	Character	18		19	36
4	MFG_UI	Character	2		37	38
5	MFG_QUANT	Numeric	5		39	43
6	MFG_UI1	Character	2		44	45
7	MFG_PRICE	Numeric	8	2	46	53
8	MFG_TPRIC	Numeric	8	2	54	61
9	MFGLINK	Numeric	7		62	68
** Total **			69			

FoxDoc did not find any associated index files
This database appears to be associated with multiple index file(s):
: C:\APADE\MFG1.MDX
Used by: RNCHANGE.PRG
: APADE1.PRG
: APADE2.PRG
: APADE6.PRG
: APADE8.PRG
: PRSIRN.PRG
: PRALRN.PRG
: PRPRRN.PRG
: MFG1 (procedure in C:\APADE\REQRE.PRG)

Structure for database : PRICE_HI.DBF Alias: I
Number of data records : 0
Last updated : 08/30/91 at 10:47

Field	Field name	Type	Width	Dec	Start	End
1	DATE_AWARD	Date	8		1	8
2	STKNR1	Character	13		9	21
3	REF_NR	Character	32		22	53
4	CONTRA_NR	Character	17		54	70
5	DATE_OF_KT	Numeric	4		71	74
6	VENDOR	Character	5		75	79
7	VENDOR_SIZ	Numeric	1		80	80
8	QUANTITY	Numeric	5		81	85
9	UNIT_ISSUE	Character	2		86	87
10	CUST_UIC	Character	6		88	93
11	NOMENCLATU	Character	50		94	143
12	PNCN	Character	32		144	175
13	STKNR	Character	13		176	188
14	UNIT_PRICE	Numeric	8	2	189	196
15	PROD_LEADT	Numeric	3		197	199
16	K_SIZE	Numeric	1		200	200
17	MFG_NAME	Character	30		201	230
18	MFG_PARTNR	Character	32		231	262
19	CAGE	Character	5		263	267
20	MFG_ADD1	Character	30		268	297
21	MFG_ADD2	Character	30		298	327
22	MFG_ADD3	Character	30		328	357
23	CITY	Character	25		358	382
24	STATE	Character	2		383	384
25	ZIP1	Character	5		385	389
26	ZIP2	Character	4		390	393
27	SPAW_PHON1	Numeric	3		394	396
28	SPAW_PHON2	Numeric	3		397	399
29	SPAW_PHON3	Numeric	4		400	403
30	CONTA	Character	30		404	433
31	PR_NR1	Numeric	5		434	438
32	PR_NR2	Numeric	4		439	442
33	USE	Character	1		443	443
34	BPA	Character	1		444	444
35	BPA_NR1	Character	2		445	446
36	BPA_NR2	Character	4		447	450
** Total **			451			

FoxDoc did not find any associated index files
This database appears to be associated with multiple index file(s):
: C:\APADE\PRICE_HI.MDX
Used by: APADE1.PRG
: APADE2.PRG
: APADE6.PRG
: APADE8.PRG

```
Structure for database : REQ1.DBF       Alias: B
Number of data records :          0
        Last updated : 10/07/91 at 18:30
Field  Field name  Type        Width    Dec    Start      End
    1  RN          Character      15             1       15
    2  LINEITNR    Numeric         3            16       18
    3  T_RN        Character      18            19       36
    4  KR_NAME     Character      32            37       68
    5  STKNR       Character      13            69       81
    6  SMIC        Character       2            82       83
    7  PNCN        Character      32            84      115
    8  NOMEN       Character      50           116      165
    9  MRE_DESCR   Character       1           166      166
   10  UNITISSUE   Character       2           167      168
   11  QUANTIY     Numeric         5           169      173
   12  EST_UP      Numeric        12       2   174      185
   13  EST_PRICE   Numeric        12       2   186      197
   14  SHIP_TO     Character       9           198      206
   15  SERIALNR1   Character      15           207      221
   16  SIZE        Character      30           222      251
   17  COLOR       Character      15           252      266
   18  DRAWING_NR  Character      32           267      298
   19  PCNR        Character      10           299      308
   20  DW          Character       1           309      309
   21  TECHMANNR   Character      10           310      319
   22  MODEL       Character      10           320      329
   23  TECH_ORDRN  Character      10           330      339
   24  PDON_FFM    Date            8           340      347
   25  PDON_TO     Date            8           348      355
   26  SPEC        Character      15           356      370
   27  CLIN        Character       6           371      376
   28  TEXT_DESCR  Memo           10           377      386
   29  UPLOAD      Character       1           387      387
   30  DATEUPLOAD  Date            8           388      395
   31  UPDATE_KEY  Character      18           396      413
** Total **                      414
This database is associated with the memo file: REQ1.DBT
This database appears to be associated with index file(s):
       : C:\APADE\TEMPREQ1.NDX  (RN)
       : C:\APADE\REQ1RN.NDX  (RN)
This database appears to be associated with multiple index file(s):
       : C:\APADE\REQ1.MDX
Used by: RNCHANGE.PRG
       : RQNEXP.PRG
       : APADE1.PRG
       : APADE2.PRG
       : REQADD.PRG
       : REQED.PRG
       : RQNEXPS.PRG
       : APADE6.PRG
       : APADE8.PRG
       : PRSIRN.PRG
       : PRALRN.PRG
       : PRPRRN.PRG
       : REQ1                          (procedure in C:\APADE\REQRE.PRG)
```

Structure for database : RQNEXP.DBF
Number of data records : 0
Last updated : 08/30/91 at 10:50

Field	Field name	Type	Width	Dec	Start	End
1	REC_BEGIN	Character	1		1	1
2	CAGE	Character	5		2	6
3	DLM1	Character	1		7	7
4	STKNR	Character	13		8	20
5	DLM2	Character	1		21	21
6	SMIC	Character	2		22	23
7	DLM3	Character	1		24	24
8	UNITISSUE	Character	2		25	26
9	DLM4	Character	1		27	27
10	XQUANTITY	Character	5		28	32
11	DLM5	Character	1		33	33
12	RN	Character	15		34	48
13	DLM6	Character	1		49	49
14	SUPPLEADD	Character	6		50	55
15	DLM7	Character	1		56	56
16	SIGNALCODE	Character	1		57	57
17	DLM8	Character	1		58	58
18	ORIG_FCD	Character	2		59	60
19	DLM9	Character	1		61	61
20	MON	Character	1		62	62
21	DLM10	Character	1		63	63
22	DIST_COG	Character	2		64	65
23	DLM11	Character	1		66	66
24	PROJECTCOD	Character	3		67	69
25	DLM12	Character	1		70	70
26	XPRIORITY	Character	2		71	72
27	DLM13	Character	1		73	73
28	XRDD	Character	3		74	76
29	DLM14	Character	1		77	77
30	XEST_UP	Character	11		78	88
31	DLM15	Character	1		89	89
32	SHIP_TO	Character	9		90	98
33	DLM16	Character	1		99	99
34	KR_NAME	Character	32		100	131
35	DLM17	Character	1		132	132
36	PNCN	Character	32		133	164
37	DLM18	Character	1		165	165
38	TECH_ORDRN	Character	10		166	175
39	DLM19	Character	1		176	176
40	TECHMANNR	Character	20		177	196
41	DLM20	Character	1		197	197
42	DRAWING_NR	Character	32		198	229
43	DLM21	Character	1		230	230
44	PCNR	Character	10		231	240
45	DLM22	Character	1		241	241
46	DW	Character	1		242	242
47	DLM23	Character	1		243	243
48	NOMEN	Character	50		244	293
49	DLM24	Character	1		294	294
50	COLOR	Character	15		295	309
51	DLM25	Character	1		310	310
52	SIZE	Character	30		311	340
53	DLM26	Character	1		341	341
54	MODEL	Character	10		342	351
55	DLM27	Character	1		352	352
56	SERIALNR1	Character	15		353	367
57	DLM28	Character	1		368	368
58	SPEC	Character	15		369	383
59	DLM29	Character	1		384	384
60	JOB_ORD_NR	Character	12		385	396

61	DLM30	Character	1	397	397
62	KYOP	Character	3	398	400
63	DLM31	Character	1	401	401
64	ORGRCD	Character	4	402	405
65	DLM32	Character	1	406	406
66	CHR_FCD	Character	2	407	408
67	DLM33	Character	1	409	409
68	XDATE_STA	Character	5	410	414
69	DLM34	Character	1	415	415
70	XDATE_STO	Character	5	416	420
71	DLM35	Character	1	421	421
72	LVL_INSP	Character	1	422	422
73	DLM36	Character	1	423	423
74	CMDY_CODE	Character	7	424	430
75	DLM37	Character	1	431	431
76	APPROP	Character	7	432	438
77	DLM38	Character	1	439	439
78	SUBHEAD	Character	4	440	443
79	DLM39	Character	1	444	444
80	XOBJECTCLS	Character	3	445	447
81	DLM40	Character	1	448	448
82	BURCONTNR	Character	5	449	453
83	DLM41	Character	1	454	454
84	SUBALLTNR	Character	1	455	455
85	DLM42	Character	1	456	456
86	AUTHACCTAC	Character	6	457	462
87	DLM43	Character	1	463	463
88	TRANS_TYPE	Character	2	464	465
89	DLM44	Character	1	466	466
90	PROPACCT	Character	6	467	472
91	DLM45	Character	1	473	473
92	COUNTRYCOD	Character	2	474	475
93	DLM46	Character	1	476	476
94	COSTCODE	Character	12	477	488
95	DLM47	Character	1	489	489
96	TAC	Character	4	490	493
97	DLM48	Character	1	494	494
98	XTACAMOUNT	Character	7	495	501
99	DLM49	Character	1	502	502
100	XFUNDEXPDT	Character	5	503	507
101	REC_END	Character	1	508	508
** Total **			509		

FoxDoc did not find any associated index files
FoxDoc did not find any associated multiple indexes
Used by: RQNEXP.PRG

Structure for database : RQNWORK.DBF
Number of data records : 0
Last updated : 10/07/91 at 18:32

Field	Field name	Type	Width	Dec	Start	End
1	HAND_CARRY	Character	1		1	1
2	RN	Character	15		2	16
3	PR_NR	Character	9		17	25
4	BUYER_CODE	Character	3		26	28
5	NEW_BUYER	Character	3		29	31
6	CMDY_CODE	Character	7		32	38
7	RNSERCODE	Character	1		39	39
8	REQUIC	Character	5		40	44
9	JULIANDATE	Character	4		45	48
10	SERIALNR	Character	4		49	52
11	SUFFIX	Character	1		53	53
12	LINEITTO	Numeric	3		54	56
13	KYOP	Character	3		57	59
14	ORGRCD	Character	4		60	63
15	LVL_INSP	Character	1		64	64
16	MON	Character	1		65	65
17	DIST_COG	Character	2		66	67
18	CAGE	Character	5		68	72
19	RNKR_NAME	Character	32		73	104
20	SIGNALCODE	Character	1		105	105
21	SUPPLEADD	Character	6		106	111
22	PRIORITY	Numeric	2		112	113
23	RDD	Numeric	3		114	116
24	PROJECTCOD	Character	3		117	119
25	APPROP	Character	7		120	126
26	SUBHEAD	Character	4		127	130
27	OBJECTCLAS	Numeric	3		131	133
28	BURCONTNR	Character	5		134	138
29	SUBALLTNR	Numeric	1		139	139
30	AUTHACCTAC	Character	6		140	145
31	TRANS_TYPE	Character	2		146	147
32	PROPACCT	Character	6		148	153
33	COUNTRYCOD	Character	2		154	155
34	COSTCODE	Character	12		156	167
35	FUND_EXPDT	Numeric	5		168	172
36	ORIG_FCD	Character	2		173	174
37	CHR_FCD	Character	2		175	176
38	JOB_ORD_NR	Character	12		177	188
39	SHIPTO	Character	5		189	193
40	TAC	Character	4		194	197
41	TAC_AMOUNT	Numeric	10		198	207
42	PIIN	Character	16		208	223
43	CLIN	Character	6		224	229
44	STATUS	Character	2		230	231
45	CHR_FUND	Character	1		232	232
46	PR_NR1	Character	5		233	237
47	PR_NR2	Character	4		238	241
48	PMT_IDA	Character	1		242	242
49	PMT_FAADCP	Character	1		243	243
50	PMT_DCASR	Character	1		244	244
51	PMT_OTHER	Character	10		245	254
52	ACQ_ADVICE	Character	1		255	255
53	INV_TO_15	Character	1		256	256
54	INV_TO_19	Character	1		257	257
55	INV_TO_OTH	Character	1		258	258
56	ADMIN_DCAS	Character	1		259	259
57	ADMIN_NSC	Character	1		260	260
58	ADMIN_OTH	Character	10		261	270
59	DATE_INPUT	Date	8		271	278
60	DATE_ASSIG	Date	8		279	286

61	DATE_AWARD	Date	8		287	294
62	DATE_AWPR	Date	8		295	302
63	DATE_SUSPE	Date	8		303	310
64	SUSPEND	Character	1		311	311
65	DATE_REINS	Date	8		312	319
66	DATE_CAN	Date	8		320	327
67	DATE_CLAUS	Date	8		328	335
68	BPA_REV	Character	1		336	336
69	MFGLINK	Numeric	7		337	343
70	LINEITNR	Numeric	3		344	346
71	T_RN	Character	18		347	364
72	KR_NAME	Character	32		365	396
73	STKNR	Character	13		397	409
74	SMIC	Character	2		410	411
75	PNCN	Character	32		412	443
76	NOMEN	Character	50		444	493
77	MRE_DESCR	Character	1		494	494
78	UNITISSUE	Character	2		495	496
79	QUANTIY	Numeric	5		497	501
80	EST_UP	Numeric	12	2	502	513
81	EST_PRICE	Numeric	12	2	514	525
82	SHIP_TO	Character	9		526	534
83	SERIALNR1	Character	15		535	549
84	SIZE	Character	30		550	579
85	COLOR	Character	15		580	594
86	DRAWING_NR	Character	32		595	626
87	PCNR	Character	10		627	636
88	DW	Character	1		637	637
89	TECHMANNR	Character	10		638	647
90	MODEL	Character	10		648	657
91	TECH_ORDRN	Character	10		658	667
92	PDON_FFM	Date	8		668	675
93	PDON_TO	Date	8		676	683
94	SPEC	Character	15		684	698
95	TEXT_DESCR	Memo	10		699	708
96	APPRUB	Character	11		709	719
97	XLINEITNR	Character	3		720	722
98	XQUANTITY	Character	5		723	727
99	XEST_UP	Character	11		728	738
100	XEST_PRICE	Character	11		739	749
101	XLINEITTO	Character	3		750	752
102	XPRIORITY	Character	2		753	754
103	XRDD	Character	3		755	757
104	XOBJECTCLS	Character	3		758	760
105	XFUNDEXPDT	Character	5		761	765
106	XTACAMOUNT	Character	7		766	772
107	XMFGLINK	Character	7		773	779
108	XDATE_STA	Character	5		780	784
109	XDATE_STO	Character	5		785	789
110	UPLOAD	Character	1		790	790
111	UPDATE_KEY	Character	18		791	808
** Total **			809			

This database is associated with the memo file: RQNWORK.DBT
This database appears to be associated with index file(s):
: C:\APADE\TEMPWORK.NDX (UPDATE_KEY)
This database appears to be associated with multiple index file(s):
: C:\APADE\RQNWORK.MDX
Used by: RQNEXP.PRG

Structure for database : SITE.DBF Alias: I
Number of data records : 1
Last updated : 08/30/91 at 16:18

Field	Field name	Type	Width	Dec	Start	End
1	UIC	Character	5		1	5
2	ADDR_LINES	Numeric	1		6	6
3	ADDR1	Character	30		7	36
4	ADDR2	Character	30		37	66
5	ADDR3	Character	30		67	96
6	CITY	Character	20		97	116
7	STATE	Character	2		117	118
8	ZIP	Character	5		119	123
9	ZIP_EXT	Character	4		124	127
10	ADDR_PLAIN	Character	50		128	177
11	RQNPUR_DAY	Numeric	3		178	180
12	RQNPUR_DOL	Numeric	7		181	187
13	RQNCOPIES	Numeric	2		188	189
** Total **			190			

FoxDoc did not find any associated index files
FoxDoc did not find any associated multiple indexes
Used by: SITEEDIT.PRG
: PRSIRN.PRG
: PRALRN.PRG
: PRPRRN.PRG

```
Structure for database : SUS.DBF       Alias: A
Number of data records :          0
        Last updated : 10/07/91 at 18:38
Field  Field name  Type        Width    Dec    Start      End
    1  RN          Character      15              1       15
    2  BUYER_CODE  Character       3             16       18
    3  SUS_UIC     Character       5             19       23
    4  SUS_CODE    Character       3             24       26
    5  DATE_SUS    Date            8             27       34
    6  DATE_REV    Date            8             35       42
    7  DATE_PRINT  Date            8             43       50
    8  DATE_REINS  Date            8             51       58
    9  ITEM1       Character      50             59      108
   10  ITEM2       Character      50            109      158
   11  COUNT       Character       1            159      159
** Total **                      160
This database appears to be associated with index file(s):
       : C:\APADE\SUSRN.NDX  (RN)
This database appears to be associated with multiple index file(s):
       : C:\APADE\SUS.MDX
Used by: RNCHANGE.PRG
       : APADE1.PRG
       : APADE2.PRG
       : REINSTAT.PRG
       : REQADD.PRG
       : REQED.PRG
       : REQCAN.PRG
       : APADE6.PRG
       : APADE8.PRG
       : PRSIRN.PRG
       : PRALRN.PRG
       : PRPRRN.PRG
       : SUSREVSC.PRG
       : SUSREVBR.PRG
       : SUSREVPR.PRG
       : SUS                    (procedure in C:\APADE\REQRE.PRG)
       : SUSPEND                (procedure in C:\APADE\SUSREVBR.PRG)
```

Structure for database : TECHDB.DBF
Number of data records : 0
Last updated : 10/07/91 at 18:32

Field	Field name	Type	Width	Dec	Start	End
1	RN	Character	15		1	15
2	DOC_IDENT	Character	3		16	18
3	ROUTE_IDEN	Character	3		19	21
4	MEDIA_STAT	Character	1		22	22
5	RNSERCODE	Character	1		23	23
6	DEMAND	Character	1		24	24
7	REQUIC	Character	5		25	29
8	SUPPLEADD	Character	6		30	35
9	SIGNALCODE	Character	1		36	36
10	DIST_COG	Character	3		37	39
11	FUNDCODE	Character	2		40	41
12	CHR_FUND	Character	2		42	43
13	LVL_INSP	Character	1		44	44
14	JULIANDATE	Character	4		45	48
15	SERIALNR	Character	4		49	52
16	SUFFIX	Character	1		53	53
17	PRIORITY	Numeric	2		54	55
18	RDD	Numeric	3		56	58
19	FSCM	Character	4		59	62
20	NIIN	Character	9		63	71
21	SMIC	Character	2		72	73
22	ACQ_ADVICE	Character	1		74	74
23	COG	Character	2		75	76
24	UNITISSUE	Character	2		77	78
25	QUANTITY	Numeric	5		79	83
26	STATUS_CD	Character	2		84	85
27	UNITPRICE	Numeric	8	2	86	93
28	DESCRIPTIO	Memo	10		94	103
29	NOMEN	Character	50		104	153
30	PR_NR1	Numeric	5		154	158
31	PR_NR2	Numeric	4		159	162
32	BUYER_CODE	Character	3		163	165
33	JD_ENTRY	Numeric	4		166	169
34	PMT_IDA	Character	1		170	170
35	PMT_FAADCP	Character	1		171	171
36	PMT_DCASR	Character	1		172	172
37	PMT_OTHER	Character	10		173	182
38	TAC_CODE	Character	4		183	186
39	TAC_AMT	Numeric	8		187	194
40	APPR_SUB	Character	11		195	205
41	OBJECTCLAS	Numeric	3		206	208
42	BURCONTNR	Character	5		209	213
43	SUBALLTNR	Numeric	1		214	214
44	AUTHACCTAC	Character	6		215	220
45	TRANS_TYPE	Character	2		221	222
46	PROPACCT	Character	6		223	228
47	COUNTRYCOD	Character	2		229	230
48	COSTCODE	Character	12		231	242
49	SHIP_TO	Character	6		243	248
50	INV_TO_15	Character	1		249	249
51	INV_TO_19	Character	1		250	250
52	INV_TO_OTH	Character	10		251	260
53	ADMIN_DCAS	Character	1		261	261
54	ADMIN_NSC	Character	1		262	262
55	ADMIN_OTH	Character	10		263	272
** Total **			273			

This database is associated with the memo file: TECHDB.DBT
FoxDoc did not find any associated index files
This database appears to be associated with multiple index file(s):
: C:\APADE\TECHDB.MDX

Used by: **RNCHANGE.PRG**

APPENDIX D

RPSV2 SAMPLE FORMS AND REPORTS

ORDER FOR SUPPLIES OR SERVICES

(Contractor must submit four copies of invoice.)

Form Approved
OMB No. 0704-0187
Expires Aug 31, 1992

PAGE 1 OF

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, Va 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0187), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send your completed form to the procurement official identified in item 6.

1. CONTRACT/PURCH ORDER NO.	2. DELIVERY ORDER NO.	3. DATE OF ORDER	4. REQUISITION/PURCH REQUEST NO.	5. CERTIFIED FOR NATIONAL DEFENSE UNDER DMS REG 1
				DO

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than 6)	CODE	8. DELIVERY FOB
				☐ DEST ☐ OTHER (See schedule if other)

9. CONTRACTOR	CODE	FACILITY CODE	10. DELIVER TO FOB POINT BY (Date)	11. MARK IF BUSINESS IS
NAME AND ADDRESS			12. DISCOUNT TERMS	☐ SMALL ☐ SMALL DISADVANTAGED ☐ WOMAN-OWNED
			13. MAIL INVOICES TO	

14. SHIP TO	CODE	15. PAYMENT WILL BE MADE BY	CODE	MARK ALL PACKAGES AND PAPERS WITH CONTRACT OR ORDER NUMBER

16. TYPE OF ORDER

DELIVERY	☐	This delivery order is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.
PURCHASE	☐	Reference your ____ furnish the following on terms specified herein.

ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.

NAME OF CONTRACTOR	SIGNATURE	TYPED NAME AND TITLE	DATE SIGNED

☐ If this box is marked, supplier must sign Acceptance and return the following number of copies:

17. ACCOUNTING AND APPROPRIATION DATA

ITEM NO.	APPROPRIATION SYMBOL AND SUBHEAD	OBJECT CLASS.	BUREAU CONT. NO.	SUB-ALLOT	AUTH'N ACCT'G ACTY	TRANS. TYPE	PROPERTY ACCT'G ACTY	COUNTRY	COSTCODE	AMOUNT

18. ITEM NO.	19. SCHEDULE OF SUPPLIES/SERVICES	20. QUANTITY ORDERED/ ACCEPTED*	21. UNIT	22. UNIT PRICE	23. AMOUNT

* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.

24. UNITED STATES OF AMERICA

BY: CONTRACTING/ORDERING OFFICER

25. TOTAL	
29. DIFFERENCES	

26. QUANTITY IN COLUMN 20 HAS BEEN

☐ INSPECTED ☐ RECEIVED ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED

DATE SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

36. I certify this account is correct and proper for payment.

DATE SIGNATURE AND TITLE OF CERTIFYING OFFICER

27. SHIP. NO. ☐ PARTIAL ☐ FINAL

31. PAYMENT ☐ COMPLETE ☐ PARTIAL ☐ FINAL

28. D. O. VOUCHER NO.

32. PAID BY

30. INITIALS

33. AMOUNT VERIFIED CORRECT FOR

34. CHECK NUMBER

35. BILL OF LADING NO.

37. RECEIVED AT	38. RECEIVED BY	39. DATE RECEIVED	40. TOTAL CONTAINERS	41. S/R ACCOUNT NUMBER	42. S/R VOUCHER NO.

MONTHLY CONTRACTING SUMMARY OF ACTIONS $25,000 OR LESS

REPORT CONTROL SYMBOL
DD-A&L(M)1015

SECTION A - GENERAL INFORMATION

1. REPORT FOR MONTH ENDING	2. CONTRACTING OFFICE	
	a. NAME	b. ADDRESS (Street, City, State and Zip Code)
3. REPORTING OFFICE CODE		

SECTION B - CONTRACTING ACTIONS

(1) Category	(2) Number of Actions	(3) Dollar Value
1. TARIFF OR REGULATED ACQUISITIONS		
2. FOREIGN / INTERAGENCY		
a. FMS/INTERNATIONAL AGREEMENTS		
b. ACTION WITH ANOTHER FEDERAL AGENCY		
3. SMALL BUSINESS		
a. SMALL PURCHASE PROCEDURES		
b. DELIVERY ORDERS - GSA FSS		
c. DELIVERY ORDERS - OTHER FSS		
d. DELIVERY ORDERS - OTHER		
e. OTHER CONTRACTING ACTIONS		
4. LARGE BUSINESS		
a. SMALL PURCHASE PROCEDURES		
b. DELIVERY ORDERS - GSA FSS		
c. DELIVERY ORDERS - OTHER FSS		
d. DELIVERY ORDERS - OTHER		
e. OTHER CONTRACTING ACTIONS		
5. DOMESTIC OR FOREIGN ENTITIES PERFORMING OUTSIDE THE U.S.		
a. SMALL PURCHASE PROCEDURES		
b. DELIVERY ORDERS - GSA FSS		
c. DELIVERY ORDERS - OTHER FSS		
d. DELIVERY ORDERS - OTHER		
e. OTHER CONTRACTING ACTIONS		
6. EDUCATIONAL, NONPROFIT, OTHER		
a. SMALL PURCHASE PROCEDURES		
b. DELIVERY ORDERS - GSA FSS		
c. DELIVERY ORDERS - OTHER FSS		
d. DELIVERY ORDERS - OTHER		
e. OTHER CONTRACTING ACTIONS		
7. TOTAL CONTRACTING ACTIONS		
a. SMALL PURCHASE PROCEDURES		
b. DELIVERY ORDERS - GSA FSS		
c. DELIVERY ORDERS - OTHER FSS		
d. DELIVERY ORDERS - OTHER		
e. OTHER CONTRACTING ACTIONS		
8. TOTAL MODIFICATIONS EXCLUDING SMALL PURCHASE PROCEDURES		

SECTION C - EXTENT COMPETED

1. COMPETED		
a. SMALL BUSINESS CONCERNS		
b. LARGE BUSINESS CONCERNS		
c. DOMESTIC OR FOREIGN ENTITIES PERFORMING OUTSIDE THE U.S.		

SECTION C (CONTINUED)

(1) Category	(2) Number of Actions	(3) Dollar Value
1. d. EDUCATIONAL, NONPROFIT, OTHER		
2. NOT AVAILABLE FOR COMPETITION		
a. SMALL BUSINESS CONCERNS		
b. LARGE BUSINESS CONCERNS		
c. DOMESTIC OR FOREIGN ENTITIES PERFORMING OUTSIDE THE U.S.		
d. EDUCATIONAL, NONPROFIT, OTHER		
3. NOT COMPETED		
a. SMALL BUSINESS CONCERNS		
b. LARGE BUSINESS CONCERNS		
c. DOMESTIC OR FOREIGN ENTITIES PERFORMING OUTSIDE THE U.S.		
d. EDUCATIONAL, NONPROFIT, OTHER		

SECTION D-RESEARCH,DEVELOPMENT,TEST & EVALUATION ACTIONS

1. SMALL BUSINESS		
2. LARGE BUSINESS		
3. DOMESTIC OR FOREIGN ENTITIES PERFORMING OUTSIDE THE U.S.		
4. HISTORICALLY BLACK COLLEGES & UNIVERSITIES OR MINORITY INSTITUTIONS (HBCU/MI)		
5. OTHER ENTITIES		

SECTION E - SELECTED SOCIO-ECONOMIC STATISTICS

1. SMALL BUSINESS (SB) SET-ASIDE		
a. SB - SMALL PURCHASE SET-ASIDE		
b. SB SET-ASIDE		
c. COMBINED SB/LABOR SURPLUS AREA SET-ASIDE		
2. SMALL DISADVANTAGED BUSINESS (SDB) ACTIONS		
a. THROUGH SBA - SECTION 8(a)		
b. SDB SET-ASIDE/SDB PREFERENCE		
c. SB - SMALL PURCHASE SET-ASIDE		
d. SB SET-ASIDE		
e. OTHER		
3. WOMAN OWNED SMALL BUSINESS		
4. HBCU/MI		
5. SHELTERED WORKSHOP		
6. LABOR SURPLUS AREA SET-ASIDE		

SECTION F-SMALL PURCHASE PROCEDURES-DOLLAR VALUE RANGES

1. $0.01 TO $1,000.00		
2. $1,000.01 TO $2,500.00		
3. $2,500.01 TO $10,000.00		
4. $10,000.01 TO $25,000.00		

SECTION G - REMARKS AND AUTHENTICATION

1. REMARKS (Continue on separate page(s) if necessary)

2. CONTRACTING OFFICER			3. DATE REPORT SUBMITTED (YYMMDD)
a. TYPED NAME (Last, First, Middle Initial)	b. SIGNATURE	c. TELEPHONE NUMBER (Include Area Code)	

DD FORM 1057 OCT 89 (DSC RPSV2)

MONTHLY CONTRACTING SUMMARY OF ACTIONS $25,000 OR LESS (Continued)

REPORT FOR MONTH ENDING	REPORTING OFFICE CODE

SECTION G - NAVY FIELD CONTRACTING SYSTEM MANAGEMENT DATA

SUMMARY OF ACTIONS BY PURCHASE METHOD

(1) Category	(2) Number of Actions	(3) Dollar Value
1. NIB/NISH		
2. ORDERS UNDER IDC/GSA/FSS		
3. BPA CALLS		
4. IMPREST FUND		
5. CREDIT CARD PURCHASES		
6. PRICED PURCHASE ORDERS		
7. PRICED BOA ORDERS		
8. UNPRICED PURCHASE ORDERS		
9. UNPRICED BOA ORDERS		
10. STANDARD FORM 44		
11. MODIFICATIONS		
12. CONTRACTS		
13. OUTSIDE PURCHASES		
14. TOTALS		

SUMMARY OF SELECTED ACTIONS

(1) Category	(2) Number of Actions	(3) Dollar Value
15. ADP PURCHASES		
16. TELECOMMUNICATION PURCHASES		
17. COMMUNICATION SVC AGREEMENTS		
18. BPA's ISSUED		
19. IDC's AWARDED ($25,000 OR LESS)		

WORKLOAD MANAGEMENT DATA

(1) Category	(2) Small Purchase	(3) Large Purchase
20. BEGINNING WORK-IN-PROCESS		
21. RECEIPTS		
22. CANCELLATIONS		
23. COMPLETIONS		
24. ENDING WORK-IN-PROCESS		
25. BUYER OPERATION HOURS		
26. AVERAGE AGE OF WORK-IN-PROCESS		
27. CREWDAYS		
28. PURCHASE PALT		

STAFFING DATA

(1) Category	(2) Total Personnel On Board	(3) Total Trainees On Board
29. GS-1102 OPERATION		
30. GS-1102 ADMINISTRATION		
31. GS-1102 PROCUREMENT MGMT RVW		
32. GS-1105		
33. GS-1106		
34. MILITARY		
35. OTHER		

CONTRACT CLOSEOUT DATA

(1) Category	(2) Number of Contracts
36. BEGINNING BALANCE OF CONTRACTS ELIGIBLE FOR CLOSEOUT	
37. CONTRACTS ELIGIBLE THIS PERIOD	
38. CONTRACTS CLOSED OUT THIS PERIOD	
39. ENDING BALANCE OF CONTRACTS ELIGIBLE FOR CLOSEOUT	
40. NUMBER OF OVERAGE ELIGIBLE CONTRACTS ON HAND	

REMARKS (Continue on separate page(s) if necessary)

INDIVIDUAL CONTRACTING ACTION REPORT

REPORT CONTROL SYMBOL DD-P&L(M)1014

PART A

A1. TYPE OF REPORT (0 ORIGINAL, 1 CANCELLING, 2 CORRECTING) | A2. REPORT NO. | A3. CONTRACTING OFFICE CODE | A4. NAME OF CONTRACTING OFFICE

PART B

B1. CONTRACT NUMBER | B2. MOD. ORDER OR OTHER ID NUMBER | B3. ACTION DATE (YYMMDD) | B4. COMPLETION DATE (YYMMDD)

B5. CONTRACTOR IDENTIFICATION INFORMATION | B5A. ESTABLISHMENT CODE | B5B. CAGE CODE

B5C. CONTRACTOR NAME AND DIVISION NAME | B5D. CONTRACTOR ADDRESS (Street, City, State, Zip Code)

B5E. TIN | B5F. PARENT TIN | B5G. PARENT NAME

B6. PRINCIPAL PLACE OF PERFORMANCE | B6A. CITY OR PLACE CODE | B6B. STATE OR COUNTRY CODE | B6C. CITY OR PLACE/STATE OR COUNTRY NAME

B7. TYPE OBLIGATION (1 Obligation 2 Deobligation) | B8. TOTAL DOLLARS (Enter whole dollars only) | B9. FOREIGN MILITARY SALE (Y Yes N No) | B10. MULTIYEAR CONTRACT (Y Yes N No) | B11. TOTAL MULTIYEAR VALUE (Enter whole dollars only)

B12. PRINCIPAL PRODUCT OR SERVICE | B12A. FSC OR SVC CODE | B12B. DOD CLAIMANT PROG. NO. | B12C. SYSTEM OR EQUIP CODE | B12D. SIC CODE | B12E. NAME/DESCRIPTION

B13. KIND OF CONTRACTING ACTION

1 Initial Letter Contract
2 Definitive Contract Superseding Letter Contract
3 Definitive Contract
4 Order Under DoD BOA
5 Order Under DoD Contract
6 Order/Modification Under Federal Schedule
7 Order Under Another Agency's Contract
8 Action With Another Federal Agency
9 Small Purchase Procedure

MODIFICATION
A Additional Work (new agreement)
B Additional Work (other)
C Funding Action
D Change Order
E Termination for Default
F Termination for Convenience
G Cancellation

PART C (Do Not Complete This Part If Item B9 Above Is Coded Y or If Item B13 Is Coded 8)

C1. SYNOPSIS (Y Yes N No) | C2. REASON NOT SYNOPSIZED (A Urgency B Other than Urgency) | C3. EXTENT COMPETED (A Competed B Not Available for Competition C Follow on to Competed Action D Not Competed) | C4. SEA TRANSPORTATION (Y Yes – Positive Response to DFARS 252.247.7202; N No – Negative Response to DFARS 252.247.7202; U Unknown – No response or Clause Not Included in Solicitation)

C5. TYPE OF CONTRACT

A Fixed Price Redetermination
J Firm Fixed Price
K Fixed Price Economic Price Adjustment
L Fixed Price Incentive
R Cost Plus Award Fee
S Cost Contract
T Cost Sharing
U Cost Plus Fixed Fee
V CPIF
Y Time and Materials
Z Labor Hours

C6. NUMBER OF OFFERORS SOLICITED (1 One, 2 More than one) | C7. NUMBER OF OFFERS RECEIVED (1 One, 2 More than one)

C8. SOLICITATION PROCEDURES

A Full & Open Competition-Sealed Bid
B Full & Open Competition-Competitive Proposal
C Full & Open Competition-Combination
D Architect-Engineer
E Basic Research
F Multiple Award Schedule
G Alternate Source-Reduced Cost
H Alternate Source-Mobilization
J Alternate Source-Eng/R&D Capability
K Set-aside
M Otherwise Authorized by Statute
N Other than Full & Open Competition

C9. AUTHORITY FOR OTHER THAN FULL & OPEN COMPETITION

1A Unique Source
1B Follow-on Contract
1C Unsolicited Research Prop
1D Patent Data Rights
1E Utilities
1F Standardization
1G Only One Source-Other
2A Urgency
3A Mobilization
3B Essential R & D Capability
4A International Agreement
5A Authorized by Statute
5B Authorized Resale
6A National Security
7A Public Interest

C10. SUBJECT TO LABOR STANDARDS STATUTES

A Walsh-Healey Act Manufacturer
B Walsh-Healey Act Dealer
C Service Contract Act
D Davis-Bacon Act
Z Not Subject to Above

C11. COST OR PRICING CERTIFICATE (Y Yes, Obtained N No, Not Obtained W Waived)

C12. CONTRACT FINANCING (Progress Payments(PP) or Advance Payments(AP))

A DFARS Clause 52.232-7007 or FAR Clause 52.232-16
B DFARS Clause 52.232-7004
C Percentage of Completion PP
D Unusual PP or AP
Z None of the Above

C13. FOREIGN TRADE DATA | C13A. NUMBER OF OFFERORS | C13B. BUY AMERICAN ACT PERCENT DIFFERENCE | C13C. PLACE OF MANUFACTURE (A U.S. B FOREIGN) | C13D. COUNTRY OF ORIGIN CODE

PART D (Do Not Complete This Part If Item B9 Above Is Coded Y or If Item B13 Is Coded 6 or 8)

D1. TYPE OF BUSINESS (Make one selection)

A Small Disadvantaged Bus. Performing in U.S.
B Other Small Business Performing in U.S.
C Large Business Performing in U.S.
D Workshop for the Blind or Other Severely Handicapped
F Hospital
L Foreign Concern / Entity
M Domestic Firm Performing Outside U.S.
N Historically Black Colleges & Universities or Minority Institutions (HBCU/MI)
P Other Educational
Z Other Nonprofit

D2. REASON NOT AWARDED TO SMALL DISADVANTAGED BUS. (SDB)

A No Known SDB Source
B SDB Not Solicited
C SDB Solicited No Offer
D SDB Solicited Offer Not Low
Z Other Reason

D3. REASON NOT AWARDED TO SMALL BUSINESS (SB)

A No Known SB Source
B SB Not Solicited
C SB Solicited No Offer
D SB Solicited Offer Not Low
Z Other Reason

D4. PREFERENCE PROGRAM | D4A. TYPE OF SB SET-ASIDE

A None
B Total SB Set-Aside
C Partial SB Set-Aside
D Combined SB/Labor Surplus Area Set-Aside
E Total SDB Set-Aside
Y Small Emerging Business Set-Aside
Z Small Business Small Purchase Set-Aside

D4B. TYPE OF SDB SET-ASIDE/PREFERENCE

A None
B Section 8(A)
C Total SDB Set-Aside
D SDB Evaluation Preference-Unrestricted
E SDB Preferential Consideration Partial SB Set-Aside

D4C. HBCU/MI SET-ASIDE

A None
B HBCU or MI Total Set-Aside
C HBCU or MI Partial Set-Aside

D4D. OTHER PREFERENCE PROGRAM

A Directed to Workshops
B Partial Labor Surplus Area (LSA) Set-Aside
C Tie-Bid LSA Preference
Z None of the Above

D4E. PREMIUM PERCENT

D5. ETHNIC GROUP

A Asian-Indian American
B Asian-Pacific American
C Black American
D Hispanic American
E Native American
F Other Certified
Z No Representation

D6. WOMAN OWNED SMALL BUSINESS (Y Yes N No U Uncertified)

D7. SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM

A Not a SBIR Phase I/II
B SBIR Program Phase I Action
C SBIR Program Phase II Action

D8. SUBCONTRACTING PLAN – SB, SDB, OR HBCU/MI

A Plan Not Included – No Subcontracting Possibilities
B Plan Not Required
C Plan Required, Incentive Not Included
D Plan Required, Incentive Included

D9. DEMONSTRATION TEST PROGRAM (Y Yes N No)

D10. SIZE OF SMALL BUSINESS NUMBER OF EMPLOYEES or AVERAGE ANNUAL GROSS REVENUE

A 50 or Less
B 51 - 100
C 101 - 250
D 251 - 500
E 501 - 750
F 751 - 1000
G Over 1000
M 1,000,000 or Less
N 1,000,001 - 2,000,000
P 2,000,001 - 3,500,000
R 3,500,001 - 5,000,000
S 5,000,001 - 10,000,000
T 10,000,001 - 17,000,000
U Over 17,000,000

D11. EMERGING SMALL BUSINESS (Y Yes N No)

PART E

E1 | E2 | E3 | E4 | E5 | E6 | E7 | E8

PART F

F1. NAME OF CONTRACTING OFFICER OR REPRESENTATIVE | F2. SIGNATURE | F3. TELEPHONE NO. | F4. DATE

INDIVIDUAL CONTRACTING ACTION REPORT (Continued)

REPORT NO.	CONTRACTING OFFICE CODE

PART G — NAVY PMRS DATA

G1. PR RECEIPT DATE (YYMMDD)	G2. PALT ADJUSTMENT	G3. CUSTOMER UIC

G4. LOGISTICS DATA

- RS Replenishment Spares
- IP Initial Provisioning
- RR Repairs for Repairables
- OO None of the Above

G5. TYPE ORDERING INSTRUMENT

- A Recurring Requirement
- B Initial Placement BOA
- C Award/Modification ESA
- D Award/Modification IDC
- E Award/Modification Incrementally Funded
- F Award/Modification Subject to Availibility Funds or Initial Citation of Funds
- G Increased Funding of Undefinitized Action
- H Undefinitized MSR Job Order
- J Definitization of MSR Job Order
- K CA Action Retained In-House
- M CA Awarded to Contractor
- P Priced BOA/IDC Order
- R Government vs Private Industry Competition Retained In-House
- T Government vs Private Industry Competition Award to Contractor
- U Undefinitized Contractual Action
- Z Definitization of Contractual Action

G6. CONGRESSIONALLY MANDATED LONG LEADTIME

- Y Yes
- N No

G7. DEFINITIZATION ACTIVITY

- D DCAS
- L Local

G8. DEFINITIZING ACTIVITY SD & UIC	G9. PRIOR REPORT

G10. LOW OFFEROR

- Y Yes
- N No

G11. AWARD BASED ON

- A Positive PAS
- B Directed COC
- C Sole Source
- D Sole Offeror
- E Different Commodity Less Complex Item
- F Delivery or Other Non-Quality Issue
- G Special Quality Provision/ Instruction Added
- H Proprietary Data
- J Other than Above

G12. REFERRED TO QA/TECH PERSONNEL

- Y Yes
- N No

G13. QA/TECH PERSONNEL RECOMMENDATION

- A None
- B No Award
- C Award
- D Conduct PAS
- E Post-Award Conference
- F Product Oriented Survey
- G Other Survey
- H Issue QALI
- J Increased Inspection
- K Source Inspection
- L Other Inspection
- M Other than Above

G14. CONTRACT ADMINISTRATION

- A Assigned to CAS
- B Assigned to CAS QA Retained
- C Retained

G15. TYPE OF WARRANTY

- A Performance
- B Supply-Complex
- C Supply-Non-Complex
- D Commercial
- E None of Above

G16. LENGTH OF WARRANTY

- A 6 Months or Less
- B Over 6 Months- Not Over 9 Months
- C Over 9 Months - Not Over 12 Months
- D Over 12 Months

G17. TYPE OF QUALITY PROVISION

- A MIL-Q-9858
- B MIL-I-45208
- C Standard Inspection
- D Contractor Inspection
- E COC

G18. COMPETITIVE CHARACTERISTICS

- A Price Competitive
- B Design / Technical
- C Follow on After Price Competition
- D Follow on After Design / Technical
- E Non-Competitive - Catalog or Market Price
- F Non-Competitive - Other

G19. DPA REQUIREMENTS

- A No DPA Required - Warner Exempt
- B No DPA Required - Embedded FIP (FIRMR 201-1002(e))
- C No DPA Required - Other Reasons
- D Regulatory DPA (FIRMR 201-20.305-1)
- E Specific Agency DPA
- F Specific Aquisition Data

G20. DPA NUMBER

G21 - SYSCOM USE

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

G22 - LOCAL USE

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

CONDITIONS/INSTRUCTIONS GOVERNING THE USE OF THIS FORM AND SUPPLEMENTARY ITEMS TO BE CONSIDERED AN INTEGRAL PART OF THIS ORDER

CONDITIONS/INSTRUCTIONS GOVERNING USE OF THIS FORM:

This form will only be used for requesting work and/or services. This form will not be used for requesting local purchases, contractual procurement, or material from stock. The purchase/procurement, or requisitioning from stock, of material incident to the performance of this order, however, is permissable

Note: Requests for the purchase or contractual procurement of material or services will be accomplished through the use of Request for Contractual Procurement, NAVCOMPT FORM 2276 (8-81).

Request for standard and/or non-standard stock available within the U.S. Government will be accomplished through the use of the DOD Single Line Item Requisition System Documents (DD Form 1348 and/or 1348-6, as appropriate).

SUPPLEMENTARY ITEMS:

1 Written acceptance of this request is required and will be accomplished by completing Block 16 on one copy of this order and returning it to the requesting activity cited in Block 8. Acceptance must be on a reimbursable basis only

2 Amounts authorized by this document have been reserved by the requesting activity and will be obligated upon receipt of the acceptance copy of this document

3 Amounts authorized by this document may not be exceeded. Additional funds, if required, will be requested from the activity cited in Block 8 Approval of such requests will be accomplished by the requesting activity through the issuance of an amendment to this document, appropriately reflecting the amount of additional funds being provided

4 The funds authorized by this document are available for obligation by the performing activity cited in Block 10 until the date indicated in Block 4, or Block 5, as appropriate. Funds not actuall obligated by the performing activity by that date will be returned to the requesting activity via Status of Reimbursable Orders or similar acceptable form

5 Extension of the work completion date cited in Block 5 of this order, if required, must be requested in writing and is subject to the approval of the requesting activity cited in Block 8. Approval of such requests will be accomplished by the requesting activity through the issuance of an amendment to this document, citing the work completion date.

6 This order is issued as a Project Order, as indicated in Block 13and is placed in accordance with 41 U.S. Code 23 and DOD Directive 7220.1 (Regulation Governing the Use of Project Orders). Performance of the work and/or services requested must be accomplished in accordance with these same statutes and regulations.

7 Billings will normally be submitted by the performing activity on a monthly basis unless specifically stated in Block 14

8 This order is placed pursuant to the Economy Act (31 U.S.C. 686)and will be performed in accordance therewith

9 Amounts authorized by this document ARE subject to Section 3679, R.S.

10 Amounts authorized by this document ARE NOT subject to Section 3679, R.S.

REQUEST FOR CONTRACTUAL PROCUREMENT - NAVCOMPT FORM 2276 (REV. 8-81) (DSC RPSV2) Page 1 of Pages

1. THIS REQUEST MUST BE ACCEPTED ON A DIRECT CITATION BASIS ONLY AND IS SUBJECT TO THE CONDITIONS LISTED ON PAGE TWO	2. DOCUMENT NUMBER

3. REFERENCE NUMBER	4. FUNDS EXPIRE ON	5. DMS RATING	6. PRIORITY	7. DATE REQUIRED	8. AMENDMENT NO.

9. FROM	10. FOR DETAILS CONTACT:

11. TO	12. MAIL INVOICES TO:

13. ACCOUNTING DATA TO BE CITED ON RESULTING CONTRACTS

A. ACRN	B. APPROPRIATION	C. SUB-HEAD	D. OBJ. CLASS	E. BU. CONTROL	F. SA	G. AAA	H. TT	I. PAA	J. COST CODE	K. AMOUNT

14. AMOUNTS WILL NOT BE EXCEEDED IN THE OBLIGATION DOCUMENT WITHOUT PRIOR WRITTEN APPROVAL FROM THE ISSUER.	L. TOTAL THIS DOCUMENT	
	M. CUMULATIVE TOTAL	

15. PROCUREMENT BY CONTRACT OF THE FOLLOWING ITEMS IS REQUESTED

THESE ITEMS ☐ ARE ☐ ARE NOT INCLUDED IN THE INTERSERVICE SUPPLY SUPPORT PROGRAM AND REQUIRED INTERSERVICE SCREENING ☐ HAS ☐ HAS NOT BEEN ACCOMPLISHED

A. ACRN	B. ITEM NO.	C. DESCRIPTION (NAT. STOCK NO., SPEC. AND/OR DRAWING NO., ETC)	E. QUANTITY	F. UNIT	G. ESTIMATED UNIT PRICE	H. ESTIMATED AMOUNT

16. SEE ATTACHED PAGES FOR DELIVERY SCHEDULES, PRESERVATION AND PACKAGING INSTRUCTIONS, SHIPPING INSTRUCTIONS AND INSTRUCTIONS FOR DISTRIBUTION OF CONTRACTS AND RELATED DOCUMENTS.	I. GRAND TOTAL

17. TRANSPORTATION ALLOTMENT (used if FOB Contractor's plant)

18. I CERTIFY THAT THE FUNDS CITED ARE PROPERLY CHARGEABLE FOR ITEMS REQUESTED	AUTHORIZING OFFICIAL (NAME, TITLE, AND SIGNATURE)	DATE

19. THIS REQUEST IS ACCEPTED AND THE ITEMS WILL BE PROVIDED IN ACCORDANCE HEREWITH	ACCEPTING OFFICIAL (NAME, TITLE, AND SIGNATURE)	DATE

CONDITIONS/INSTRUCTIONS GOVERNING THE USE OF THIS FORM AND THE ACCEPTANCE OF THIS REQUEST

CONDITIONS/INSTRUCTIONS GOVERNING USE OF THIS FORM:

This form will only be used for requesting contractual procurement or local purchase of material or services. This form will not be used for requesting work and/or services or for requisitioning material from existing Government stocks

Note. Requests for work and/or services will be accomplished through the use of Order for Work and Services, NAVCOMPT FORM 2275 (8-81).

Request for standard and/or non-standard stock available within the U.S. Government will be accomplished through the use of the DOD Single Line Item Requisition System Documents (DD Form 1348 and/or 1348-6, as appropriate).

CONDITIONS/INSTRUCTIONS GOVERNING THE ACCEPTANCE OF THIS REQUEST:

1 Written acceptance of this request is required and will be accomplished by completing Block 19 on one copy of this request and returning it to the requesting activity cited in Block 9. Acceptance must be on a direct citation basis only.

2 Amounts authorized by this document have been reserved and/or committed by the requesting activity and will be obligated upon receipt of contracts or purchase orders or delivery orders awarded.

3 Amounts authorized by this document may not be exceeded. Additional funds, if required, will be requested from the activity cited in Block 9. Approval of such requests will be accomplished by the requesting activity through the issuance of an amendment to this document, appropriately reflecting the amount of additional funds being provided. The grand total cited in Block M constitutes a 3679, R.S. limitation when the purchasing office or contracting activity is a separate entity not under the immediate supervision of the commanding officer issuing the request.

4. Resulting obligation documents must be executed by the activity cited in Block 11 by the date indicated in Block 4. Such documents must include the document number cited in Block 2.

5 A complete copy of each executed obligation document resulting from this request must be forwarded to the activity cited in Block 9.

NAVY C. O. D. ORDER (4270)

NAVSUP FORM 1321 (5-68) (DSC RPSV2)

PAGE 1 OF

DATE OF ORDER	ORDER NO.

This is a C.O.D. order and is used to eliminate costly paperwork on small purchases. Ship immediately C.O.D. provided total cost, including C. O. D. and transportation charges does not exceed monetary limit.

↑ This number must appear on all packages and papers relating to this order.

ISSUED BY

MONETARY LIMITATION

DELIVERY DATE

SHIP TO

TO:

MARK FOR: Imprest Fund Cashier

SHIP C. O. D. ONLY
PARTIAL SHIPMENTS
WILL NOT BE ACCEPTED

ITEM	DESCRIPTION	QTY.	UNIT	UNIT PRICE	TOTAL

INSTRUCTIONS

1. If material is not available or additional information is desired, advise issuing office immediately.
2. If total cost will exceed monetary limitation, withhold shipment and advise issuing office of total cost including C. O. D. and transportion charges.
3. If delivery cannot be made as specified above, withhold action, and advise issuing office of time required to effect delivery.
4. Deduct cash discount from C. O. D. price. Carrier or Post Office will be paid cash upon delivery.
5. Submit priced sales document (invoice, sales slip, delivery ticket, etc.) with material.
6. To prevent unnecessary correspondence, advise on duplicate copy of order when and how shipment will be made.
7. If the above terms and conditions cannot be met, submit your quotation on a copy of this Form and await instructions.

SIGNATURE	TITLE	DATE

FOR USE OF SUPPLIER

- ☐ C. O. D. SHIPPING DATE _____
- ☐ MATERIAL NOT AVAILABLE
- ☐ ABOVE TERMS CANNOT BE MET
- ☐ COST EXCEEDS MONETARY LIMITATION. TOTAL COST, INCLUDING C. O. D. AND TRANSPORTATION CHARGES: $_____

REMARKS

SIGNATURE (Supplier)	TITLE	TELEPHONE	DATE

BLANKET PURCHASE AGREEMENT (BPA) CALL REVIEW REPORT

ACTIVITY	
ACTIVITY WHICH ISSUED BPA (IF OTHER THAN ABOVE)	
BPA NUMBER	**TOTAL CALLS PLACED DURING PERIOD REVIEWED**
PERIOD COVERED BY REVIEW	**DATE OF REVIEW**

NOTE: This form is to be used for conducting and reporting the semi-annual review of BPA files required by paragraph 5130 of Field Purchasing, NavSup Publication 467, and by Section 3, Part 6, of the Defense Acquisition Regulation (DAR).

INSTRUCTIONS: The completed form shall be retained in the BPA file, and, for those BPA's utilized and reviewed by personnel outside the jurisdiction of the command of the contracting office issuing the BPA, a signed copy of the completed form shall be forwarded to the contracting office. If any unsatisfactory conditions are found during the review (as evidenced by a "No" answer below) an explanation must be provided which includes action taken or to be taken to correct the noted condition.

		YES	NO
1	ARE REGULAR SUPPLY CHANNELS BEING SCREENED PRIOR TO PLACING CALLS (EXCEPT WHERE THE SCREENING REQUIREMENT IS EXPRESSLY WAIVED)?		
2	ARE CALLS BEING PLACED ONLY BY PROPERLY AUTHORIZED PERSONNEL ?		
3	ARE THE ESTABLISHED MONETARY LIMITATIONS OF DESIGNATED CALLING INDIVIDUALS BEING ADHERED TO ?		
4	DO INDIVIDUAL CALLS REPRESENT THE TOTAL KNOWN AND FUNDED REQUIREMENTS FOR THE SUPPLIES BEING PURCHASED ? (i.e. REQUIREMENTS ARE NOT BEING SPLIT TO CIRCUMVENT ESTABLISHED MONETARY LIMITATIONS.)		
5	IS PROPER ATTENTION BEING GIVEN TO PRICING AS EVIDENCED BY APPARENT REASONABLENESS OF PRICES PAID ?		
6	IS THE FILE BEING ADEQUATELY DOCUMENTED, e.g. CALL RECORD INFORMATION AND SIGNATURE JUSTIFICATION FOR EXCEPTION TO MANDATORY SUPPLY SOURCES, AND (FOR CALLS OVER $1,000.00) RECORD OF FIRMS SOLICITED AND RESPONSES RECEIVED OR JUSTIFICATION FOR SOLE SOURCE ?		
7	DOES THIS BPA CONTRACTOR APPEAR TO BE RECEIVING AN EQUITABLE PORTION OF THE CALLS OF $1,000.00 OR LESS PLACED FOR SUPPLIES IN HIS CATEGORY		

REMARKS

I CERTIFY THAT THE ABOVE LISTED BPA FILE HAS BEEN REVIEWED AND THE FINDINGS NOTED ABOVE ARE COMPLETE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF	**NAME AND TITLE OF REVIEWING OFFICIAL**
SIGNATURE	**DATE**

1. PROMPT PAY CERTIFICATION
UIC:
ACTIVITY NAME :
ADDRESS :

2. Contract / Purchase Order no. Call no. / D.O. no.	3. Requisition no.
4. Invoice no. Invoice Date	5. Date Material / Service Received
6. Certifying Signature	7. Date Material / Service Accepted
8. Contract Acceptance Terms	9. Phone no. Autovon : Commercial :
10. Date Invoice Received by Certifying Activity	11. Gross Amount of Invoice

12. ☐ Approved for Payment $
☐ Accepted and Conforms to Contract Except as Noted. Prices are Agreed upon. Fair and Reasonable. (See explanation below)

13. a. Forwarded to : b. Date Forwarded :

14. Imprest Fund Purchase Erroneously Not Sent DDD
No Purchase Order Required
Special Payment Terms (most perishable agricultural commodities, other).
ANYTHING OTHER THAN NET 30 DAYS

15 Name and Title of Authorized Government Representative

16. Accounting Data (when applicable) **Attach NAVCOMPT 2035 for Additional ACRNs.**

17. ☐ Obligation was Validated in Data Base Date Validated

18. Remarks / Additional Information

REQUEST FOR QUOTATIONS
(THIS IS NOT AN ORDER)

PAGE OF PAGES

1. REQUEST NO.	2. DATE ISSUED	3. REQUISITION/PURCHASE REQUEST	4. CERT. FOR NAT. DEF. UNDER BDSA REG. 2 AND/OR DMS REG. 1 >	RATING

5A. ISSUED BY	6. DELIVER BY (Date)
5B. FOR INFORMATION CALL: (Name and telephone no.) (No collect calls)	7. DELIVERY ☐ FOB DESTINATION ☐ OTHER (See Schedule)
8. TO: NAME AND ADDRESS, INCLUDING ZIP CODE	9. DESTINATION (Consignee and address, including ZIP Code)

10. PLEASE FURNISH QUOTATIONS TO THE ISSUING OFFICE ON OR BEFORE CLOSE OF BUSINESS (Date)	11. BUSINESS CLASSIFICATION (Check appropriate boxes)
	☐ SMALL ☐ OTHER THAN SMALL ☐ DISADVANTAGED ☐ WOMAN-OWNED

IMPORTANT: This is a request for information, and quotations furnished are not offers. If you are unable to quote, please so indicate on this form and return it. This request does not commit the Government to pay any costs incurred in the preparation of the submission of this quotation or to contract for supplies or services. Supplies are of domestic origin unless othewise indicated by quoter. Any representations and/or certifications attached to this Request for Quotation must be completed by the quoter.

12. SCHEDULE (Include applicable Federal, State and local taxes)

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)

13 DISCOUNT FOR PROMPT PAYMENT >	10 CALENDAR DAYS %	20 CALENDAR DAYS %	30 CALENDAR DAYS %	CALENDAR DAYS %

NOTE Page 2 must also be completed by the quoter

14. NAME AND ADDRESS OF QUOTER (Street, city, county, State and ZIP Code)	15. SIGNATURE OF PERSON AUTHORIZED TO SIGN QUOTATION	16. DATE OF QUOTATION
	17. NAME AND TITLE OF SIGNER (Type or print)	18. TELEPHONE NO. (Include area code)

AMENDMENT OF SOLICITATION / MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than item 6)	CODE

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and ZIP Code)	(X)	9A. AMENDMENT OF SOLICITATION NO.
		9B. DATED (SEE ITEM 11)
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE / FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15 and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

A.	THIS CHANGE ORDER IS ISSUED PURSUANT TO: FAR 52.243-1. THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
B.	THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (*such as changes in paying office, appropriation data, etc.*) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
C.	THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO THE AUTHORITY OF: 10 USC 2304(G) / 41 USC 253.
D.	OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return ___ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
_____ (Signature of person authorized to sign)		BY _____ (Signature of Contracting Officer)	

STANDARD FORM 36, JULY 1966 GENERAL SERVICES ADMINISTRATION FED. PROC. REG. (41 CFR) 1-16.101 (DSC RPSV2)	**CONTINUATION SHEET**	REF. NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
NAME OF OFFEROR OR CONTRACTOR				

FAR 52.252.2 (Jun 1988) CLAUSES INCORPORATED BY REFERENCE

This order incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting officer will make their full text available.

	CLAUSE	DATED	TITLE
(X)	52.203.1	(Apr 1984)	Officials Not To Benefit
(X)	52.203.3	(Apr 1984)	Gratuities
(X)	52.203.5	(Apr 1984)	Covenant Against Contingent Fees
(X)	52.203.6	(Jul 1985)	Restrictions On Subcontractor Sales To The Government
(X)	52.203.7	(Oct 1988)	Anti-Kickback Procedures
(X)	52.222.3	(Apr 1984)	Convict Labor
(X)	52.225.13	(May 1989)	Restrictions on Contracting with Sanctioned Persons
(X)	52.232.1	(Apr 1984)	Payments
(X)	52.232.8	(Apr 1989)	Discounts For Prompt Payment
(X)	52.232.25	(Apr 1989)	Prompt Payment
(X)	52.233.1	(Apr 1984)	Disputes
(X)	52.233.3	(Aug 1989)	Protests After Award
(X)	52.246.1	(Apr 1984)	Contractor Inspection Requirements
(X)	52.246.16	(Apr 1984)	Responsibilities For Supplies
(X)	52.210.5	(Apr 1984)	New Material
(X)	52.210.7	(Apr 1984)	Used or Reconditioned Material, Residual Inventory and Former Government Surplus Property
(X)	52.212.10	(Sep 1989)	Delivery Of Excess Quantities
(X)	52.225.3	(Jan 1989)	Buy American Act - Supplies
( )	52.222.36	(Apr 1984)	Affirmative Action For Handicapped Workers
( )	52.219.8	(Jun 1985)	Utilization Of Small Business Concerns And Small Disadvantaged Business
( )	52.222.26	(Apr 1984)	Equal Opportunity
( )	52.222.35	(Apr 1984)	Affirmative Action For Special Disabled and Vietnam Era Veterans
( )	52.232.23	(Jan 1986)	Assignment of Claims
( )	52.243.1	(Aug 1987)	Changes - Fixed Price
( )	52.243.1 ALT I	(Aug 1987)	Changes - Fixed Price
( )	52.243.1 ALT II	(Aug 1987)	Changes - Fixed Price
( )	52.249.1	(Apr 1984)	Termination for Convenience of the Government (Fixed Price) (Short Form)
( )	52.249.4	(Apr 1984)	Termination for Convenience of the Government (Services) (Short Form)
( )	52.249.8	(Apr 1984)	Default (Fixed Price Supply and Services)
( )	52.204.2	(Apr 1984)	Security Requirements
( )	52.212.8	(May 1986)	Defense Priority and Allocation Requirement
( )	52.212.9	(Apr 1984)	Variation In Quantity

A variation in the quantity of any item called for by this contract will not be accepted unless the variation has been caused by conditions of loading, shipping, or packing, or allowances in manufacturing processes, and then only to the extent, if any, specified in paragraph (b) below:

(b) The permissible variation shall be limited to:____ percent increase, ____ percent decrease. This increase or decrease shall apply to _____.

( ) 52.216.18 (Apr 1984) Ordering

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders by the individuals or activities designated in the Schedule. Such orders may be issued from _____ through _____.

(b) All delivery orders are subject to the terms and conditions of this contract. In the event of a conflict between a delivery order and this contract, the contract shall control.

(c) If mailed, a delivery order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally or by written telecommunications only if authorized in the schedule.

( ) 52.216.19 (Apr 1984) Delivery Order Limitation

(a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than _____, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum order. The Contractor is not obligated to honor -

(1) Any order for a single item in excess of _____

(2) Any order for a combination of items in excess of _____ ; or

(3) A series of orders from the same ordering office within _____ days that together call for quantities exceeding the limitation in subparagraph (1) or (2) above.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216.21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum order limitation in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within _____ days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

FAR 52.252.2 (Jun 1988) CLAUSES INCORPORATED BY REFERENCE

This order incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting officer will make their full text available.

	CLAUSE	DATED	TITLE
( )	52.216.20	(Apr 1984)	Definite Quantity

(a) This is a definite-quantity, indefinite-delivery contract for the supplies or services specified, and effective for the period stated in the schedule.

(b) The Government shall order the quantity of supplies or services specified in the Schedule, and the Contractor shall furnish them when ordered. Delivery or performance shall be at locations designated in orders issued in accordance with the Ordering clause and the Schedule.

(c) Except for any limitation on quantities in the Delivery Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that time shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligation with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after _____.

( ) 52.216.21 (Apr 1984) Requirements

(a) This is a requirements contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies or services specified in the schedule are estimates only and are not purchased by this contract. Except as this contract may otherwise provide, if the Government's requirements do not result in orders in the quantities described as "estimated" or "maximum" in the Schedule, that fact shall not constitute the basis for an equitable price adjustment.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance the the ordering clause. Subject to any limitations in the Delivery Order Limitations clause or elsewhere in this contract, the Contractor shall furnish to the Government all supplies or services specified in the Schedule and called for by orders issued in accordance with the Ordering clause. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(c) Except as this contract otherwise provides, the Government shall order from the Contractor all the supplies or services specified in the Schedule that are required to be purchased by the Government activity or activities specified in the Schedule.

(d) The Government is not required to purchase from the Contractor requirements in excess of any limit on total orders under this contract.

(e) If the Government urgently requires delivery of any quantity of an item before the earliest date that delivery may be specified under this contract, and if the Contractor will not accept an order providing for the accelerated delivery, the Government may acquire the urgently required goods or services from another source.

(f) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractorwithin the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to thatorder to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after _____.

( ) 52.222.4 (Mar 1986) Contract Work Hours And Safety Standards Act-Overtime Compensation

( ) 52.222.20 (Apr 1984) Walsh-Healey Public Contracts Act

( ) 52.222.40 (May 1989) Service Contract Act of 1965, as amended - Contracts of $2,500 or Less

( ) 52.222.41 (May 1989) Service Contract Act of 1965, as amended.

( ) 52.222.42 (May 1989) Statement of Equivalent Rates for Federal Hires

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332

THIS STATEMENT IS FOR INFORMATION ONLY - IT IS NOT A WAGE DETERMINATION

Employee Class	Monetary Wage - Fringe Benefits

( ) 52.222.47 (May 1989) Service Contract Act (SCA) Minimum Wages and Fringe Benefits

( ) 52.232.18 (Apr 1984) Availability of Funds

( ) 52.232.19 (Apr 1984) Availability of Funds for the Next Fiscal Year

Funds are not presently available for performance under this contract beyond _____. The Government's obligation for performance of this contract beyond that is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise for performance under this contract beyond _____, until funds are made available to the Contracting Officer for performance and until the Contractor receives notice of availability, to be confirmed in writing by the Contracting Officer.

FAR 52.252.2 (Jun 1988) CLAUSES INCORPORATED BY REFERENCE

This order incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting officer will make their full text available.

	CLAUSE	DATED	TITLE
( )	52.222.48	(May 1989)	Exemption from Application of Service Contract Act Provisions

The offeror certifies _____, does not certify _____ that (i) The items of equipment to be serviced under this contract are commercial items which are used regularly for other than Government purposes, and are sold or traded by the Contractor in substantial quantities to the general public in the course of normal business operations; (ii) The contract services are furnished at prices which are, or are based on, established catalog or market prices for the maintenance, calibration and/or repair of certain ADP, scientific and medical, and/or office and business equipment. An "established catalog price" is a price included in a catalog, price list schedule, or other form that is regularly maintained by the manufacturer or the Contractor, is either published or otherwise available for inspection by customers, and states prices at which sales are currently, or were last, made to a significant number of buyers constituting the general public. An "established market price" is a current price, established in the usual course of trade between buyers and sellers free to bargain, which can be substantiated from sources independent of the manufacturer or Contractor, and (iii) The Contractor utilizes the same compensation (wage and fringe benefits) plan for all service employees performing work under the contract as the Contractor uses for equivalent employees servicing the same equipment of commercial customers.

(b) If a negative certification is made and a Service Contract wage determination is not attached to the solicitation, the Contractor shall notify the Contracting Officer as soon as possible.

(c) Failure to execute the certification in paragraph (a) of this clause or to contact the Contracting Officer as required in paragraph (b) of this clause may render the bid or offer nonresponsive.

( ) 52.223.3 (Dec 1989) Hazardous material identification and material safety data

(a) The Contractor agrees to submit a Material Safety Data Sheet (Department of Labor Form OSHA-20), as prescribed in Federal Standard No. 313B, for all hazardous material 5 days before delivery of the material, whether or not listed in Appendix A of the Standard. This obligation applies to all materials delivered under this contract which will involve exposure to hazardous materials or items containing these materials.

(b) "Hazardous material," as used in this clause, is as defined in Federal Standard No. 313B, in effect on the date of this contract.

(c) Neither the requirements of this clause nor any act or failure to act by the Government, shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(d) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, state, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(e) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate, and disclose any data to which this clause is applicable. The purposes of this right are to (i) apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous material; and (iii) have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (e)(1) above, in precedence over any other clause of this contract providing for rights in data.

(3) That the Government is not precluded from using similar or identical data acquired from other sources.

(4) That the data shall not be duplicated, disclosed, or released outside the Government, in whole or in part for any acquisition or manufacturing purpose, if the following legend is marked on each piece of data to which this clause applies -

This is furnished under United States Government Contract No._____and shall not be used, duplicated, or disclosed for any acquisition or manufacturing purpose without the permission of _____. This legend shall be marked on any reproduction of this data. (End of legend)

(5) That the Contractor shall not place the legend or any other restrictive legend on any data which (i) the Contractor or any subcontractor previously delivered to the Government without limitations or (ii) should be delivered without limitations under the conditions specified in the Federal Acquisition Regulation in the clause at 52.227.14, Rights in Data - General.

(f) the Contractor shall insert this clause, including this paragraph (f), with appropriate changes in the designation of the parties, in subcontracts at any tier (including purchase designations or purchase orders) under this contract involving hazardous material.

( )	52.237.2	(Apr 1984)	Protection of Government Buildings, Equipment, and Vegetation.
( )	52.242.10	(Apr 1984)	F.O.B. Origin - Government Bills of Lading or Prepaid Postage
( )	52.245.1	(Apr 1984)	Property Records
( )	52.245.2	(Dec 1989)	Government Furnished Property - (Fixed price contracts)
( )	52.245.2 ALT I	(Dec 1989)	Government Furnished Property - (Fixed price contracts)
( )	52.245.4	(Apr 1984)	Government Furnished Property - (Short Form)
( )	52.246.15	(Apr 1984)	Certificate of Conformance
( )	52.247.29	(Jun 1988)	F.O.B. Origin
( )	52.247.32	(J n 1988)	F.O.B. Origin, Freight Prepaid
(X)	52.247.34	(A· · 1984)	F.O.B. Destination

FAR 52.252.2 (Jun 1988) CLAUSES INCORPORATED BY REFERENCE

This order incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting officer will make their full text available.

	CLAUSE	DATED	TITLE
	DFARS		
( )	252.225.7011	(Oct 1980)	Preference for Domestic Specialty Metals - (Major Programs)
( )	252.225.7012	(Oct 1980)	Preference for Domestic Specialty Metals
( )	252.225.7013	(Apr 1984)	Preference for Domestic Hand or Measuring Tools
( )	252.227.7013	(Oct 1988)	Rights in Technical Data and Computer Software
( )	252.243.7001	(Apr 1984)	Pricing of Adjustments
( )	252.246.7000	(Dec 1969)	Material Inspection and Receiving Report
( )	252.247.7201	(Jun 1989)	Returnable Gas Cylinders

(a) Cylinders shall remain the property of the Contractor but will be loaned without charge to the Government for a period of thirty (30) days after the date of delivery of the cylinders to the f.o.b. point specified in the contract. Beginning with the first day after the expiration of the thirty (30) day loan period to and including the day the cylinders are delivered to the Contractor where the original delivery was f.o.b. origin, or to and including the date the cylinders are delivered or are made available for delivery to the Contractor's designated carrier in the case where the original delivery was f.o.b. destination, the Government shall pay the Contractor a rental of _____ dollars ($_____) per cylinder per day, regardless of type or capacity.

(b) This rental charge will be computed separately for cylinders of differing types, sizes, and cpacities, and for each point of delivery named in the contrct, A credit of thirty (30 calendar days will accrue to the Government for each cylinder, regardless of type or capacity, delivered by the Contractor. A debit of one (1) cylinder day will accrue to the Government for each cylinder for each day after delivery to the f.o.b. point specified in this contract. At the end of the contract, if the total number of debits exceeds the total number of credits, rental shall be charged for the difference. If the total number of credits equals or exceeds the total number of debits, no rental charges will be made for the cylinders. No rental shall accrue to the Contractor in excess of the replacement value per cylinder specified in (c) below.

(c) For each cylinder lost or damaged beyond repair while in the Government's possession, the Government shall pay to the Contractor the replacement value as follows, less the allocable rental paid therefor:

(i) Oxygen cylinders of 100-110 cubic foot capacity $_____

(ii) Oxygen cylinders of 200-220 cubic foot capacity $_____

(iii) Acetylene cylinders of 100-150 cubic foot capacity $_____

(iv) Acetylene cylinders of 230-300 cubic foot capacity $_____

(d) Cylinders lost, or damaged beyond repair, and paid for by the Government shall become the property of the Government, subject to the following: If any lost cylinder is located within _____(insert period of time) after payment by the Government, it may be returned to the Contractor by the Government, and the Contractor shall pay to the Government an amount equal to the replacement value, less rental computed in accordance with (a) above, beginning at the expiration of the thirty (30) day loan period specified in (a) above, and continuing to the date on which the cylinder was delivered to the Contractor.

FAR 52.252.1 (Jun 1988) SOLICITATION PROVISIONS INCORPORATED BY REFERENCE

This solicitation incorporates the below clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting officer will make their full text available.

	CLAUSE	DATED	TITLE
(X)	52.203.1	(Apr 1984)	Officials Not To Benefit
(X)	52.203.3	(Apr 1984)	Gratuities
(X)	52.203.5	(Apr 1984)	Covenant Against Contingent Fees
(X)	52.203.6	(Jul 1985)	Restrictions On Subcontractor Sales To The Government
(X)	52.203.7	(Oct 1988)	Anti-Kickback Procedures
(X)	52.219-1	(Jan 1991)	Small Business Concern Representation

(a) Representation. The offeror represents and certifies as part of its offer that it _____ is, _____ is not a small business concern and that _____ all,_____not all end items to be furnished will be manufactured or produced by a small business concern in the United States, its' territories or possessions, Puerto Rico, or the Trust Territory of the Pacific Islands.

(b) Definition. "Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in this solicitation.

(c) Notice. Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall-

(1) Be punished by imposition of fine, imprisonment, or both.

(2) Be subject to administrative remedies, including suspension and debarment; and

(3) Be ineligible for participation in programs conducted under the authority of the Act.

(X)	52.222.3	(Apr 1984)	Convict Labor
(X)	52.225.12	(May 1989)	Notice of Restrictions on Contracting with Sanctioned Persons
(X)	52.232.1	(Apr 1984)	Payments
(X)	52.232.8	(Apr 1989)	Discounts For Prompt Payment
(X)	52.232.25	(Apr 1989)	Prompt Payment
(X)	52.233.1	(Apr 1984)	Disputes
(X)	52.233.3	(Aug 1989)	Protests After Award
(X)	52.246.1	(Apr 1984)	Contractor Inspection Requirements
(X)	52.246.16	(Apr 1984)	Responsibilities For Supplies
( )	52.204.2	(Apr 1984)	Security Requirements
( )	52.219.4	(Aug 1988)	Notice of Small Business-Small Purchase Set Aside
( )	52.219.8	(Jun 1985)	Utilization Of Small Business Concerns And Small Disadvantaged Business
( )	52.222.4	(Mar 1986)	Contract Work Hours And Safety Standards Act-Overtime Compensation
( )	52.222.19	(Apr 1984)	Walsh-Healey Public Contracts Act Representation
( )	52.222.21	(Apr 1984)	Certification of Nonsegregated Facilities
( )	52.222.22	(Apr 1984)	Previous Contracts and Compliance Reports

The offeror represents that -

(a) It_____has,_____has not, participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of Executive Order No. 10925, or the clause contained in section 201 of Executive Order No. 11114;

(b) It_____has,_____has not, filed all required compliance reports, and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

( )	52.222.26	(Apr 1984)	Equal Opportunity
( )	52.222.35	(Apr 1984)	Affirmative Action For Special Disabled and Vietnam Era Veterans
( )	52.222.36	(Apr 1984)	Affirmative Action For Handicapped Workers
( )	52.222.40	(May 1989)	Service Contract Act of 1965, as amended - Contracts of $2,500 or Less
( )	52.222.41	(May 1989)	Service Contract Act of 1965, as amended.
( )	52.222.42	(May 1989)	Statement of Equivalent Rates for Federal Hires

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secreta (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332

THIS STATEMENT IS FOR INFORMATION ONLY - IT IS NOT A WAGE DETERMINATION

Employee Class	Monetary Wage - Fringe Benefits

( )	52.222.47	(May 1989)	Service Contract Act (SCA) Minimum Wages and Fringe Benefits

FAR 52.252.1 (Jun 1988) SOLICITATION PROVISIONS INCORPORATED BY REFERENCE

This solicitation incorporates the below clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting officer will make their full text available.

	CLAUSE	DATED	TITLE
(X)	52.207.4	(Aug 1987)	Economic Order Quantities-Supplies

(a) Offerors are invited to state an opinion on whether the quantity(ies) of supplies on which bids, proposals, or quotes are requested in this solicitation is(are) economically advantageous to the Government.

_____

_____

_____

_____

_____

(b) Each offeror who believes that acquisitions in different quantities would be more advantageous is invited to recommend an economic purchase quantity. If different quantities are recommended, a total and a unit price must be quoted for applicable items. An economic purchase quantity is that quantity at which a significant price break occurs. If there are significant price breaks at different quantity points, this information is desired as well.

OFFEROR RECOMMENDATIONS

ITEM	QUANTITY	PRICE QUOTATION	TOTAL

(c) The information requested in this provision is being solicited to avoid acquisitions in disadvantageous quantities and to assist the Government in developing a data base for future acquisition of these items. However, the Government reserves the right to amend or cancel the solicitation and resolicit with respect to any individual items in the event quotations received and the Government's requirements indicate that different quantities should be acquired.

(X) 52.210.5 (Apr 1984) New Material

(X) 52.210.6 (Apr 1984) Listing of Used or Reconditioned Material, Residual Inventory and Former Government Surplus Property

(X) 52.210.7 (Apr 1984) Used or Reconditioned Material, Residual Inventory and Former Government Surplus Property

( ) 52.212.7 (May 1986) Notice of Priority Rating for National Defense Use

Any contract awarded as a result of this solicitation will be _____ DX rated order, _____ DO rated order certified for national defense use under the Defense Priorities and Allocation system (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

( ) 52.212.9 (Apr 1984) Variation In Quantity

A variation in the quantity of any item called for by this contract will not be accepted unless the variation has been caused by conditions of loading, shipping, or packing, or allowances in manufacturing processes, and then only to the extent, if any, specified in paragraph (b) below:

(b) The permissible variation shall be limited to:_____ percent increase, ____ percent decrease. This increase or decrease shall apply to _____.

(X) 52.212.10 (Sep 1989) Delivery Of Excess Quantities

( ) 52.216.18 (Apr 1984) Ordering

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders by the individuals or activities designated in the Schedule. Such orders may be issued from _____ through _____.

(b) All delivery orders are subject to the terms and conditions of this contract. In the event of a conflict between a delivery order and this contract, the contract shall control.

(c) If mailed, a delivery order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally or by written telecommunications only if authorized in the schedule.

( ) 52.222.25 (Apr 1984) Affirmative Action Compliance

The offeror represents that (a) it _____has developed and has on file _____, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 cfr 60-1 and 60-2), or (b) it _____ has not previously has contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor

(X) 52.225.1 (Dec 1989) Buy American Certificate

The offeror certifies that each end product, except those listed below, is a domestic end product (as defined in the clause entitled "Buy American Act - Supplies"), and that components of unknown origin are considered to have been mined, produced, or manufactured outside the United States.

Excluded End Products	Country of Origin

Offerors may obtain from the contracting officer lists of articles, materials, and supplies excepted from the Buy American Act.

(X) 52.225.3 (Jan 1989) Buy American Act - Supplies

FAR 52.252.1 (Jun 1988) SOLICITATION PROVISIONS INCORPORATED BY REFERENCE

This solicitation incorporates the below clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting officer will make their full text available.

	CLAUSE	DATED	TITLE
( )	52.216.19	(Apr 1984)	Delivery Order Limitation

(a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than _____, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum order. The Contractor is not obligated to honor -

(1) Any order for a single item in excess of _____

(2) Any order for a combination of items in excess of _____ ; or

(3) A series of orders from the same ordering office within _____ days that together call for quantities exceeding the limitation in subparagraph (1) or (2) above.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216.21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum order limitation in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within _____ days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

( ) 52.216.20 (Apr 1984) Definite Quantity

(a) This is a definite-quantity, indefinite-delivery contract for the supplies or services specified, and effective for the period stated in the schedule.

(b) The Government shall order the quantity of supplies or services specified in the Schedule, and the Contractor shall furnish them when ordered. Delivery or performance shall be at locations designated in orders issued in accordance with the Ordering clause and the Schedule.

(c) Except for any limitation on quantities in the Delivery Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that time shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligation with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after _____.

( ) 52.216.21 (Apr 1984) Requirements

(a) This is a requirements contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies or services specified in the schedule are estimates only and are not purchased by this contract. Except as this contract may otherwise provide, if the Government's requirements do not result in orders in the quantities described as "estimated" or "maximum" in the Schedule, that fact shall not constitute the basis for an equitable price adjustment.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance the the ordering clause. Subject to any limitations in the Delivery Order Limitations clause or elsewhere in this contract, the Contractor shall furnish to the Government all supplies or services specified in the Schedule and called for by orders issued in accordance with the Ordering clause. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(c) Except as this contract otherwise provides, the Government shall order from the Contractor all the supplies or services specified in the Schedule that are required to be purchased by the Government activity or activities specified in the Schedule.

(d) The Government is not required to purchase from the Contractor requirements in excess of any limit on total orders under this contract.

(e) If the Government urgently requires delivery of any quantity of an item before the earliest date that delivery may be specified under this contract, and if the Contractor will not accept an order providing for the accelerated delivery, the Government may acquire the urgently required goods or services from another source.

(f) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractorwithin the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to thatorder to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after _____.

( ) 52.232.18 (Apr 1984) Availability of Funds

( ) 52.232.19 (Apr 1984) Availability of Funds for the Next Fiscal Year

Funds are not presently available for performance under this contract beyond _____. The Government's obligation for performance of this contract beyond that is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise for performance under this contract beyond _____, until funds are made available to the Contracting Officer for performance and until the Contractor receives notice of availability, to be confirmed in writing by the Contracting Officer.

( ) 52.237.1 (Apr 1984) Site Visit

FAR 52.252.1 (Jun 1988) SOLICITATION PROVISIONS INCORPORATED BY REFERENCE

This solicitation incorporates the below clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting officer will make their full text available.

	CLAUSE	DATED	TITLE
( )	52.222.48	(May 1989)	Exemption from Application of Service Contract Act Provisions

The offeror certifies _____, does not certify _____ that (i) The items of equipment to be serviced under this contract are commercial items which are used regularly for other than Government purposes, and are sold or traded by the Contractor in substantial quantities to the general public in the course of normal business operations; (ii) The contract services are furnished at prices which are, or are based on, established catalog or market prices for the maintenance, calibration and/or repair of certain ADP, scientific and medical, and/or office and business equipment. An "established catalog price" is a price included in a catalog, price list schedule, or other form that is regularly maintained by the manufacturer or the Contractor, is either published or otherwise available for inspection by customers, and states prices at which sales are currently, or were last, made to a significant number of buyers constituting the general public. An "established market price" is a current price, established in the usual course of trade between buyers and sellers free to bargain, which can be substantiated from sources independent of the manufacturer or Contractor, and (iii) The Contractor utilizes the same compensation (wage and fringe benefits) plan for all service employees performing work under the contract as the Contractor uses for equivalent employees servicing the same equipment of commercial customers.

(b) If a negative certification is made and a Service Contract wage determination is not attached to the solicitation, the Contractor shall notify the Contracting Officer as soon as possible.

(c) Failure to execute the certification in paragraph (a) of this clause or to contact the Contracting Officer as required in paragraph (b) of this clause may render the bid or offer nonresponsive.

( ) 52.223.3 (Dec 1989) Hazardous material identification and material safety data

(a) The Contractor agrees to submit a Material Safety Data Sheet (Department of Labor Form OSHA-20), as prescribed in Federal Standard No. 313B, for all hazardous material 5 days before delivery of the material, whether or not listed in Appendix A of the Standard. This obligation applies to all materials delivered under this contract which will involve exposure to hazardous materials or items containing these materials.

(b) "Hazardous material," as used in this clause, is as defined in Federal Standard No. 313B, in effect on the date of this contract.

(c) Neither the requirements of this clause nor any act or failure to act by the Government, shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(d) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, state, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(e) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate, and disclose any data to which this clause is applicable. The purposes of this right are to (i) apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous material; and (iii) have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (e)(1) above, in precedence over any other clause of this contract providing for rights in data.

(3) That the Government is not precluded from using similar or identical data acquired from other sources.

(4) That the data shall not be duplicated, disclosed, or released outside the Government, in whole or in part for any acquisition or manufacturing purpose, if the following legend is marked on each piece of data to which this clause applies -

This is furnished under United States Government Contract No._____and shall not be used, duplicated, or disclosed for any acquisition or manufacturing purpose without the permission of _____. This legend shall be marked on any reproduction of this data. (End of legend)

(5) That the Contractor shall not place the legend or any other restrictive legend on any data which (i) the Contractor or any subcontractor previously delivered to the Government without limitations or (ii) should be delivered without limitations under the conditions specified in the Federal Acquisition Regulation in the clause at 52.227.14, Rights in Data - General.

(f) the Contractor shall insert this clause, including this paragraph (f), with appropriate changes in the designation of the parties, in subcontracts at any tier (including purchase designations or purchase orders) under this contract involving hazardous material.

( )	52.237.2	(Apr 1984)	Protection of Government Buildings, Equipment, and Vegetation.
( )	52.245.1	(Apr 1984)	Property Records
( )	52.245.2	(Dec 1989)	Government Furnished Property - (Fixed price contracts)
( )	52.245.2 ALT I	(Dec 1989)	Government Furnished Property - (Fixed price contracts)
( )	52.245.4	(Apr 1984)	Government Furnished Property - (short form)
( )	52.246.15	(Apr 1984)	Certificate of Conformance
( )	52.242.10	(Apr 1984)	F.O.B. Origin - Government Bills of Lading or Prepaid Postage
( )	52.247.29	(Jun 1988)	F.O.B. Origin
( )	52.247.32	(Jun 1988)	F.O.B. Origin, Freight Prepaid
(X)	52.247.34	(Apr 1984)	F.O.B. Destination

FAR 52.252.1 (Jun 1988) SOLICITATION PROVISIONS INCORPORATED BY REFERENCE

This solicitation incorporates the below clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting officer will make their full text available.

	CLAUSE	DATED	TITLE
	DFARS		
( )	252.225.7009	(Oct 1980)	Preference for Certain Domestic Commodities
( )	252.225.7011	(Oct 1980)	Preference for Domestic Specialty Metals - (Major Programs)
( )	252.225.7012	(Oct 1980)	Preference for Domestic Specialty Metals
( )	252.225.7013	(Apr 1984)	Preference for Domestic Hand or Measuring Tools
( )	252.227.7013	(Oct 1988)	Rights in Technical Data and Computer Software
( )	252.227.7019	(Apr 1988)	Identification of Restricted Rights Computer Software
( )	252.246.7000	(Dec 1969)	Material Inspection and receiving Report
( )	252.247.7201	(Jun 1989)	Returnable Gas Cylinders

(a) Cylinders shall remain the property of the Contractor but will be loaned without charge to the Government for a period of thirty (30) days after the date of delivery of the cylinders to the f.o.b. point specified in the contract. Beginning with the first day after the expiration of the thirty (30) day loan period to and including the day the cylinders are delivered to the Contractor where the original delivery was f.o.b. origin, or to and including the date the cylinders are delivered or are made available for delivery to the Contractor's designated carrier in the case where the original delivery was f.o.b. destination, the Government shall pay the Contractor a rental of _____ dollars ($_____) per cylinder per day, regardless of type or capacity.

(b) This rental charge will be computed separately for cylinders of differing types, sizes, and cpacities, and for each point of delivery named in the contrct, A credit of thirty (30 calendar days will accrue to the Government for each cylinder, regardless of type or capacity, delivered by the Contractor. A debit of one (1) cylinder day will accrue to the Government for each cylinder for each day after delivery to the f.o.b. point specified in this contract. At the end of the contract, if the total number of debits exceeds the total number of credits, rental shall be charged for the difference. If the total number of credits equals or exceeds the total number of debits, no rental charges will be made for the cylinders. No rental shall accrue to the Contractor in excess of the replacement value per cylinder specified in (c) below.

(c) For each cylinder lost or damaged beyond repair while in the Government's possession, the Government shall pay to the Contractor the replacement value as follows, less the allocable rental paid therefor:

(i) Oxygen cylinders of 100-110 cubic foot capacity $_____

(ii) Oxygen cylinders of 200-220 cubic foot capacity $_____

(iii) Acetylene cylinders of 100-150 cubic foot capacity $_____

(iv) Acetylene cylinders of 230-300 cubic foot capacity $_____

(d) Cylinders lost, or damaged beyond repair, and paid for by the Government shall become the property of the Government, subject to the following: If any lost cylinder is located within _____(insert period of time) after payment by the Government, it may be returned to the Contractor by the Government, and the Contractor shall pay to the Government an amount equal to the replacement value, less rental computed in accordance with (a) above, beginning at the expiration of the thirty (30) day loan period specified in (a) above, and continuing to the date on which the cylinder was delivered to the Contractor.

 SUMMARY OF UNPRICED ORDERS PLACED BETWEEN 90.01.01 AND 90.09.30 DATE PREPARED: 90.09.17

PIIN	CALL	LOA	AMOUNT	AMOUNT PD	MOD	CAN	AWARDED	VENDOR
N62791-90-M-0154		1	.00	.00	YES	YES	90.02.12	FIVECOAT & WITH
N62791-90-M-0160		1	10000.00	4020.27	YES	NO	90.02.21	GENERAL ELECTRIC
N62791-90-M-0294		1	135.00	135.00	NO	NO	90.05.30	COMPUTER SERVICES PLUS
N62791-90-M-0333		1	1000.00	986.00	NO	NO	90.06.18	TRINITY TELECOM, INC.
N62791-90-M-0365		1	1100.00	.00	NO	NO	90.07.16	COTTONWOOD ELECTRIC CART SERVICE
N62791-90-M-0377		1	250.00	207.15	NO	NO	90.07.20	MINOLTA SERVICE AND REPAIRS
N62791-90-M-0386		1	1330.00	.00	NO	NO	90.08.03	COMPUTER SERVICES PLUS
N62791-90-M-0395		1	100.00	.00	NO	NO	90.08.10	BUSINESS MACHINES UNLIMITED
N62791-90-M-0398		1	1000.00	380.50	NO	NO	90.06.26	COMMERCIAL LAUNDRY SERVICE
N62791-90-M-0399		1	2000.00	.00	NO	NO	90.07.09	COMMERCIAL LAUNDRY SERVICE
N62791-90-M-0406		1	2235.00	.00	NO	NO	90.08.29	APEX BUSINESS SYSTEMS

********** END OF REPORT **********

DATE PREPARED : 12/27/90

REQUISITION STATUS REPORT
MATERIAL DUE TO ARRIVE BETWEEN 12/01/90 AND 12/31/90

REQUISITION NO	PIIN	CALL / DELIVERY	VENDOR	EDD	MARKED FOR	COMMENTS
N21839-0241-6A22	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	2 ORDERED, 0 RECEIVED.
N21839-0241-6A23	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	2 ORDERED, 0 RECEIVED.
N21839-0241-6A24	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0241-6A25	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	2 ORDERED, 0 RECEIVED.
N21839-0241-6A26	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	2 ORDERED, 0 RECEIVED.
N21839-0241-6A27	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0241-6A28	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0241-6A30	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	3 ORDERED, 0 RECEIVED.
N21839-0241-6A31	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0241-6A32	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0241-6A33	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	5 ORDERED, 0 RECEIVED.
N21839-0241-6A34	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	10 ORDERED, 0 RECEIVED.
N21839-0241-6A35	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	20 ORDERED, 0 RECEIVED.
N21839-0241-6A36	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	2 ORDERED, 0 RECEIVED.
N21839-0241-6A37	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	2 ORDERED, 0 RECEIVED.
N21839-0241-6A38	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	2 ORDERED, 0 RECEIVED.
N21839-0241-6A39	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	6 ORDERED, 0 RECEIVED.
N21839-0241-6A40	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0241-6A41	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0241-6A42	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0241-6A43	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	2 ORDERED, 0 RECEIVED.
N21839-0241-6A44	N62791-90-M-0433		BAYSHORE ENTERPRISES	12/27/90	USS SUPPLY AOE-6	2 ORDERED, 0 RECEIVED.
N21839-0254-6A58	N62791-90-M-0422		NATIONAL RADIO COMPANY INC.	12/13/90	USS SUPPLY AOE-6	6 ORDERED, 6 RECEIVED.
N21839-0254-6A59	N62791-90-M-0422		NATIONAL RADIO COMPANY INC.	12/13/90	USS SUPPLY AOE-6	6 ORDERED, 6 RECEIVED.
N21839-0319-6A94	F01620-90-D-0001	NU05	UNISYS CORPORATION	12/16/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0319-6A95	F01620-90-D-0001	NU05	UNISYS CORPORATION	12/16/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0319-6A96	F01620-90-D-0001	NU05	UNISYS CORPORATION	12/16/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0319-6A97	F01620-90-D-0001	NU05	UNISYS CORPORATION	12/16/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0319-6A98	F01620-90-D-0001	NU05	UNISYS CORPORATION	12/16/90	USS SUPPLY AOE-6	1 ORDERED, 0 RECEIVED.
N21839-0334-6A01	N62791-91-M-0088		SAN DIEGO DATA PRODUCTS	12/03/90	CODE 530.6	2 ORDERED, 2 RECEIVED.
N62791-0065-1401	N62791-90-M-0231		DRESSER-RAND CO.	12/07/90	USS TRIPOLI (LPH-10)	1 ORDERED, 1 RECEIVED.
N62791-0074-6060	N62791-90-M-0256		WILLIAM & WATTS, INC.	12/03/90	USS INDEPENDENCE (CV	1 ORDERED, 1 RECEIVED.
N62791-0158-1006	N62791-90-M-0324		WILMINGTON INSTRUMENT COMPANY,	12/17/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0158-1007	N62791-90-M-0324		WILMINGTON INSTRUMENT COMPANY,	12/17/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0158-1060	N62791-90-M-0330		COOK BROS	12/15/90	USS FORT FISHER (LSD	2 ORDERED, 2 RECEIVED.
N62791-0162-7583	FPI .	N62791-90-F-0375	UNICOR	12/16/90	CODE 183	1 ORDERED, 1 RECEIVED.
N62791-0205-1718	N62791-90-M-0383		GENERAL ELECTRIC COMPANY	12/30/90	USS FORT FISHER	1 ORDERED, 0 RECEIVED.
N62791-0206-5528	N00244-90-A-3671	002A	NBS SUPPLY	12/17/90	USS MERRILL	1 ORDERED, 1 RECEIVED.
N62791-0206-5529	N00244-90-A-3671	002A	NBS SUPPLY	12/17/90	USS MERRILL	4 ORDERED, 4 RECEIVED.
N62791-0206-5821	N00244-90-A-3671	002A	NBS SUPPLY	12/17/90	USS ELLIOT DD-967	4 ORDERED, 4 RECEIVED.
N62791-0227-3066	N00244-90-A-3568	002A	L.A. MARINE HARDWARE	12/31/90	USS FORT MCHENRY LSD	2 ORDERED, 2 RECEIVED.
N62791-0227-3067	N00244-90-A-3568	002A	L.A. MARINE HARDWARE	12/31/90	USS FORT MCHENRY LSD	1 ORDERED, 1 RECEIVED.
N62791-0242-A935	N00244-90-A-3990	008A	SHIPS PARTS INC	12/27/90	USS VINCENNES CG-49	1 ORDERED, 1 RECEIVED.
N62791-0276-7278	N62791-91-M-0050		ASM INTERNATIONAL	12/08/90	CODE 244TL	1 ORDERED, 0 RECEIVED.
N62791-0276-7281	N62791-91-M-0081		SAN DIEGO BLUEPRINT CO.	12/04/90	CODE 240S	1 ORDERED, 1 RECEIVED.
N62791-0276-7282	N62791-91-M-0081		SAN DIEGO BLUEPRINT CO.	12/04/90	CODE 240S	2 ORDERED, 2 RECEIVED.
N62791-0276-7283	N62791-91-M-0081		SAN DIEGO BLUEPRINT CO.	12/04/90	CODE 240S	2 ORDERED, 2 RECEIVED.
N62791-0276-7284	N62791-91-M-0081		SAN DIEGO BLUEPRINT CO.	12/04/90	CODE 240S	1 ORDERED, 1 RECEIVED.
N62791-0278-7299	GPO .	N62791-91-F-0121	SUPERINTENDENT OF DOCUMENTS	12/21/90	CODE 450	1 ORDERED, 0 RECEIVED.
N62791-0288-7310	N62791-91-M-0070		HEWLETT PACKARD	12/19/90	CODE 500S	1 ORDERED, 1 RECEIVED.

SERVICE ITEMS
REQUISITION FILE STATUS REPORT

PIIN	CALL / DELIVERY	REQUISITION	UI	QTY	EXT AMOUNT	AWARD DATE	NOMENCLATURE	VENDOR
N00123-87-D-5302	MU01	N00000-0000-0000	EA	1.0	250.00	90.09.11	ASDF ASDF ASDF ASDF	TRIAD
N00123-87-D-5302	MU01	N00000-0000-0000A	EA	5.0	1900.00	90.09.11	CLIN 0007AB: PROVIDE SERVICE AND MATERIAL TO EMPTY, CLEAN, GAS FREE, AND CERTIFY AS "SAFE FOR MEN-SAFE FOR HOT WORK" BILGES IN MACHINERY SPACES FROM 501 TO 1000 SQ. FT.	TRIAD
N00123-88-D-5252	MU01	N62791-0000-0001	SF	200.0	100.00	90.09.11	CLIN 0001 : REMOVE MIL-D-23003, MIL-D-24483, AND TWO PART POLYURETHANE NON-SKID DECK COVERING IN ACCORDANCE WITH SECTION 'C' HEREIN.	R.T. NELSON COMPANY
N00123-88-D-5252	MU01	N62791-0000-0001A	SF	5000.0	7500.00	90.09.11	CLIN 0004AA: ROLL ON APPLICATION METHOD	R.T. NELSON COMPANY
N00123-88-D-5252	MU01	N62791-0000-0001B	SF	2500.0	5125.00	90.09.11	CLIN 0005AA: ROLL ON APPLICATION METHOD AREAS OF UP TO 15,000 SQUARE FEET.	R.T. NELSON COMPANY
- - -		N62791-0000-0009	EA	1.0	1.00	. .	1111111111111111111111111111111111111111 2222222222222222222222222222222222222222 3333333333333333333333333333333333333333 4444444444444444444444444444444444444444 5555555555555555555555555555555555555555 6666666666666666666666666666666666666666	

********** END OF REPORT **********

PAGE : 1
DATE PREPARED : 10/25/90

RENEWABLE ITEMS
REQUISITION FILE STATUS REPORT

PIIN	CALL / DELIVERY	REQUISITION	UI	QTY	EXT AMOUNT	RENEW DATE	NOMENCLATURE	VENDOR
N62791-90-M-0174		N62791-0039-7788	EA	1.0	225.00	10/01/90	UPDATE OF GPS-II, PMS-II, RMS-II AND PLOT II VERSION 8.1 TO VERSION 9.0.	NORTH AMERICAN MICA, INC.
N62791-90-M-0174		N62791-0039-7789	LT	1.0	175.00	10/01/90	WARRANTY SERVICE FOR SOFTWARE PMS-II, RMS-II, GPS-II & PLOT II SER 12500.	NORTH AMERICAN MICA, INC.
N62791-90-M-0271		N62791-0120-7333	SW	1.0	3225.00	10/01/90	RENEWAL OF HAYSTACK ONLINE SUBSCRIPTION SERVICES FOR 01 APR 90 TO 30 SEP 90.	INFORMATION HANDLING SERVICES
N62791-90-M-0304		N62791-0141-7423	EA	4.0	279.00	11/01/90	PAGER (BEEPER), NUMERIC DISPLAY (DIGITAL) WITH VIBRATOR	SAN DIEGO PAGING INC.
N62791-90-M-0271		N62791-9114-R082	SW	1.0	2650.00	10/01/90	HAYSTACK CD-ROM DATA SUBSCRIPTION AND APL SUBSCRIPTION RENEWAL FOR 01 APR 90 TO 30 SEP 90.	INFORMATION HANDLING SERVICES
N62791-90-M-0271		N62791-9114-R083	EA	7.0	2100.00	10/01/90	HAYSTACK III CD-ROM COMPACT DISC DRIVES.	INFORMATION HANDLING SERVICES
N62791-90-M-0306		N62791-9120-R088	SW	1.0	2842.00	10/01/90	RENEWAL OF PARTSMASTER SUBSCRIPTION SERVICE FROM 01 APR 90 TO 90 SEP 30. CUSTOMER #:N17801.	NATIONAL STANDARDS ASSOCIATION, INC.
N62791-90-M-0071		N62791-9319-7459	SW	1.0	575.00	10/01/90	SUBSCRIPTION: GOVERNMENT CONTRACTS, 11/1/89 - 11/1/90.	MATTHEW BENDER COMPANY
N62791-90-M-0071		N62791-9319-7460	SW	1.0	117.00	10/01/90	SUBSCRIPTION: MOORE'S FEDERAL PRACTICE/ PROCEDURE, 11/1/89 - 11/1/90.	MATTHEW BENDER COMPANY
N62791-90-M-0073		N62791-9319-7461	SW	1.0	735.00	12/01/90	SUBSCRIPTION: FEDERAL CONTRACTS REPORTS, 1/1/90 - 1/1/91.	BNA, INC.
N62791-90-M-0073		N62791-9319-7462	SW	1.0	559.00	12/01/90	SUBSCRIPTION: U.S. LAW WEEK, 1/1/90 - 1/1/91.	BNA, INC.
N62791-90-M-0073		N62791-9319-7463	SW	1.0	643.00	10/01/90	SUBSCRIPTION: GOVERNMENT EMPLOYEE RELATIONS REPORT, 11/1/89 - 11/1/90.	BNA, INC.
N62791-90-M-0073		N62791-9319-7464	SW	1.0	535.00	10/01/90	SUBSCRIPTION: FAIR EMPLOYMENT PRACTICE, 11/1/89 - 11/1/90.	BNA, INC.
N62791-90-M-0073		N62791-9319-7465	SW	1.0	151.00	10/01/90	SUBSCRIPTION: EEOC COMPLIANCE MANUAL, 11/1/89 - 11/1/90.	BNA, INC.
N62791-90-M-0072		N62791-9319-7468	SW	1.0	632.00	12/01/90	SUBSCRIPTION: THE GOVERNMENT CONTRACTOR, 1/1/90 - 1/1/91 (BI-WEEKLY).	FEDERAL PUBLICATIONS INC.
N62791-90-M-0072		N62791-9319-7469	SW	1.0	568.00	12/01/90	SUBSCRIPTION: GOVERNMENT CONTACTS CITATOR, 1/1/90 - 1/1/91 (QUARTERLY).	FEDERAL PUBLICATIONS INC.
N62791-90-M-0072		N62791-9319-7470	SW	1.0	460.00	12/01/90	SUBSCRIPTION: BRIEFING PAPERS, 1/1/90 - 1/1/91 (MONTHLY).	FEDERAL PUBLICATIONS INC.
N62791-90-M-0072		N62791-9319-7471	SW	1.0	230.00	12/01/90	SUBSCRIPTION: EXTRAORDINARY CONTRACTUAL RELIEF, 1/1/90 - 1/1/91 (ANNUAL).	FEDERAL PUBLICATIONS INC.
N62791-90-M-0072		N62791-9319-7472	SW	1.0	840.00	12/01/90	SUBSCRIPTION: COMPTROLLER GENERAL PROCUREMENT DECISIONS, 1/1/90 -1/1/91 (MONTHLY).	FEDERAL PUBLICATIONS INC.
N62791-90-M-0072		N62791-9319-7473	SW	1.0	660.00	12/01/90	SUBSCRIPTION: FEDERAL COURT PROCUREMENT DECISIONS, 1/1/90 - 1/1/91, (MONTHLY).	FEDERAL PUBLICATIONS INC.
GS-02F-50117	N62791-90-F-0069	N62791-9319-7474	SW	1.0	1036.00	11/01/90	SUBSCRIPTION: GOVERNMENT CONTRACTS REPORTS, 12/89 - 12/90.	
N62791-90-M-0094		N62791-9319-7475	SW	1.0	15.00	12/01/90	MANUAL: SAN DIEGO AIR POLLUTION CONTROL, DISTRICT RULES AND REGULATIONS, 12/31/89 THRU 12/31/90.	AIR POLLUTION CONTROL DISTRICT

REQUISITION STATUS REPORT
MATERIAL PAST MATERIAL DUE DATE

REQUISITION NO	PIIN	CALL / DELIVERY	VENDOR	EDD	MARKED FOR	COMMENTS
N62791-0228-7772	GS-02F-48507	N62791-91-F-0019	INFORMATION HANDLING SERVICES	10/01/90	CODE 180	1 ORDERED, 0 RECEIVED.
N62791-0261-8859	N62791-90-M-0429		ALFA-LAVAL SEPARATOR CO.	09/24/90	USS RENTZ FFG-46	1 ORDERED, 0 RECEIVED.
N62791-0269-4204	N62791-90-M-0438		AZTEC NETWORK SOLUTIONS	09/28/90	CODE 6030	1 ORDERED, 0 RECEIVED.
N62791-0270-7197	N62791-90-M-0449		POLAROID SERVICE CENTER	10/12/90	CODE 240S MANU/WOOD	1 ORDERED, 0 RECEIVED.
N62791-0271-7254	F19630-88-D-0005	NU03	AT & T FEDERAL SYSTEMS	09/28/90	CODE 1011S	1 ORDERED, 0 RECEIVED.
N62791-0271-7258	N62791-90-M-0454		AT & T VIDEOTAPE LIBRARY	10/28/90	CODE 1011S	1 ORDERED, 0 RECEIVED.
N62791-0274-S001	N62791-91-M-0008		OSAM OF CALIFORNIA, INC.	10/01/90	SEE SCHEDULE (NEXT P	12 ORDERED, 3 RECEIVED.
N62791-0274-S002	N62791-91-M-0009		MOTOROLA COMMUNICATIONS	10/01/90	SEE SCHEULE (FOLLOWI	12 ORDERED, 2 RECEIVED.
N62791-0274-S003	N62791-91-M-0007		RECORDS RETRIEVAL INC.	10/01/90	CODE 500	12 ORDERED, 0 RECEIVED.
N62791-0274-S005	N62791-91-M-0002		US WEST CELLULAR OF CALIFORNIA	10/01/90	CODE 100	12 ORDERED, 3 RECEIVED.
N62791-0274-S007	GS-00F-06573	N62791-91-F-0001	SIMPLEX TIME RECORDING	10/01/90	VARIOUS CODES	11 ORDERED, 0 RECEIVED.
N62791-0274-S008	N62791-91-M-0003		STEWART OXYGEN SERVICE	10/01/90	VARIOUS CODES	12 ORDERED, 0 RECEIVED.
N62791-0274-S009	N62791-91-M-0005		PACTEL PAGING OF SAN DIEGO	10/01/90	VARIOUS CODES	12 ORDERED, 2 RECEIVED.
N62791-0274-S010	N62791-91-M-0006		NORTH AMERICAN MICA, INC.	10/01/90	CODE 1011S & CODE 21	12 ORDERED, 0 RECEIVED.
N62791-0274-S013	N62791-91-M-0020		MINI-GRAPHICS SYSTEMS, INC.	10/01/90	CODE 253	12 ORDERED, 1 RECEIVED.
N62791-0274-S018	N62791-91-M-0018		SAN DIEGO PAGING INC.	11/01/90	CODE 140	12 ORDERED, 3 RECEIVED.
N62791-0274-S019	GS-02F-48507	N62791-91-F-0019	INFORMATION HANDLING SERVICES	10/01/90	CODE 185	1 ORDERED, 0 RECEIVED.
N62791-0274-S022	GS-02F-48507	N62791-91-F-0019	INFORMATION HANDLING SERVICES	10/01/90	CODE 253TL	1 ORDERED, 0 RECEIVED.
N62791-0274-S023	GS-02F-48507	N62791-91-F-0019	INFORMATION HANDLING SERVICES	10/01/90	CODE 195	1 ORDERED, 0 RECEIVED.
N62791-0274-S024	GS-02F-48507	N62791-91-F-0019	INFORMATION HANDLING SERVICES	10/01/90	CODE 195	1 ORDERED, 0 RECEIVED.
N62791-0274-S026	N62791-91-M-0020		MINI-GRAPHICS SYSTEMS, INC.	10/26/90	CODE 244	1 ORDERED, 0 RECEIVED.
N62791-0276-7278	N62791-91-M-0050		ASM INTERNATIONAL	12/08/90	CODE 244TL	1 ORDERED, 0 RECEIVED.
N62791-0278-7299	GPO	N62791-91-F-0121	SUPERINTENDENT OF DOCUMENTS	12/21/90	CODE 450	1 ORDERED, 0 RECEIVED.
N62791-0284-7307	N62791-91-M-0028		OCE-INDUSTRIES INC.	10/16/90	VARIOUS CODES	3 ORDERED, 0 RECEIVED.
N62791-0284-7308	N62791-91-M-0028		OCE-INDUSTRIES INC.	10/16/90	VARIOUS CODES	3 ORDERED, 0 RECEIVED.
N62791-0297-1073	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	2 ORDERED, 0 RECEIVED.
N62791-0297-1074	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1075	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	3 ORDERED, 0 RECEIVED.
N62791-0297-1076	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	3 ORDERED, 0 RECEIVED.
N62791-0297-1077	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	3 ORDERED, 0 RECEIVED.
N62791-0297-1078	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1079	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1080	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1081	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1082	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1083	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1084	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1085	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1086	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	4 ORDERED, 0 RECEIVED.
N62791-0297-1087	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1088	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1089	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1090	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	2 ORDERED, 0 RECEIVED.
N62791-0297-1091	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1092	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1093	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0297-1094	N62791-91-M-0040		BERGEN-PATERSON	12/13/90	USS OKINAWA (LPH-3)	1 ORDERED, 0 RECEIVED.
N62791-0302-7335	N62791-91-M-0101		TRANSPORTATION RESEARCH INSTIT	12/20/90	CODE 253	12 ORDERED, 0 RECEIVED.
N62791-0305-A943	N62791-91-M-0045		PACIFIC MARINE SYSTEMS	12/05/90	USS VINCENNES (CG-49	2400 ORDERED, 0 RECEIVED.
N62791-0305-A944	N62791-91-M-0045		PACIFIC MARINE SYSTEMS	12/05/90	USS VINCENNES (CG-49	2400 ORDERED, 0 RECEIVED.

PAGE : 1
DATE PREPARED : 90.09.17

REQUISITION STATUS REPORT
INVOICE RECEIVED - MATERIAL NOT RECEIVED

REQUISITION NO	PIIN	CALL / DELIVERY	VENDOR	MARKED FOR	EDD	INV RCVD	INV DATE	INVOICE NUMBER
N62791-0141-7420	N62791-90-M-0295		BARCLAY'S LAW PUBLISHERS	CODE 140	90.07.31	90.07.05	90.06.08	D147
N62791-0152-4429	N62791-90-M-0298		RAYTHEON	LCU-1635	90.06.11	90.08.09	90.07.18	E3269 78004
N62791-0212-8808	N00244-90-A-3990	006A	SHIPS PARTS INC	USS MCCLUSKY	90.08.20	90.08.23	90.08.21	2594
N62791-0227-7668	N62791-90-M-0403		DEMCO INC.	CODE 244TL	90.08.17	90.08.27	90.08.23	D807962

********** END OF REPORT **********

PAGE : 1
DATE PREPARED : 12/27/90

REQUISITION STATUS REPORT
MATERIAL RECEIVED - INVOICE NOT RECEIVED

REQUISITION NO	PIIN	CALL / DELIVERY	VENDOR	MARKED FOR	EDD	DATE RCVD	POD
N21839-0254-6A60	N00244-90-A-4463	001A	CONTINENTAL LABORATORY PRODUCT	USS SUPPLY AOE-6	09/24/90	11/21/90	YES
N21839-0254-6A62	N00244-90-A-4463	001A	CONTINENTAL LABORATORY PRODUCT	USS SUPPLY AOE-6	09/24/90	11/21/90	YES
N21839-0311-6A90	N62791-91-M-0046		WILLARD MARINE, INC.	CODE 530	11/21/90	11/19/90	YES
N47456-0093-0393	N62791-90-M-0252		AMERICAN METALS BEARING CO.	USS SAFEGUARD (ARS-50)	05/15/90	08/03/90	YES
N62791-0176-7612	GS-00F-94641	N62791-90-F-0360	INTERIOR ELEMENTS INC.	CODE 183	10/02/90	12/06/90	YES
N62791-0176-7613	GS-00F-94641	N62791-90-F-0360	INTERIOR ELEMENTS INC.	CODE 183	10/02/90	12/06/90	YES
N62791-0177-7618	N62791-90-M-0358		NANTUCKET CORPORATION	PER CODE 1011S	07/20/90	12/17/90	YES
N62791-0190-4079	N62791-90-M-0399		COMMERCIAL LAUNDRY SERVICE	YRBM(L)-38	08/23/90	09/14/90	YES
N62791-0194-8804	N62791-90-M-0364		LTV ENERGY PRODUCTS COMPANY	USS MCCLUSKY FFG-41	10/13/90	10/19/90	YES
N62791-0205-8849	N62791-90-M-0388		KIRKHILL RUBBER CO.	USS THACH FFG-43	09/17/90	09/10/90	YES
N62791-0214-7665	N62791-90-M-0395		BUSINESS MACHINES UNLIMITED	CODE 244 TL	08/13/90	11/30/90	YES
N62791-0240-7790	N62791-90-M-0435		NEBS-FORM DIVISION	CODE 240	11/05/90	12/10/90	YES
N62791-0276-7281	N62791-91-M-0081		SAN DIEGO BLUEPRINT CO.	CODE 240S	12/04/90	/ /	YES
N62791-0276-7282	N62791-91-M-0081		SAN DIEGO BLUEPRINT CO.	CODE 240S	12/04/90	12/11/90	YES
N62791-0276-7283	N62791-91-M-0081		SAN DIEGO BLUEPRINT CO.	CODE 240S	12/04/90	12/11/90	YES
N62791-0276-7284	N62791-91-M-0081		SAN DIEGO BLUEPRINT CO.	CODE 240S	12/04/90	12/11/90	YES
N62791-0296-5565	N62791-91-M-0038		LITTON SYSTEMS, INC.	USS MERRILL (DD-976)	11/10/90	12/18/90	YES
N62791-0299-7332	FPI .	N62791-91-F-0073	UNICOR	CODE 180	12/19/90	12/13/90	YES
N62791-0299-7333	FPI .	N62791-91-F-0073	UNICOR	CODE 180	12/19/90	12/13/90	YES
N62791-0306-5568	N62791-91-M-0042		LITTON SYSTEMS, INC.	USS MERRILL (DD-976)	11/18/90	12/18/90	YES
N62791-0317-8748	N62791-91-M-0065		MARINE & RESTAURANT FABRICATOR	USS MAHLON TISDALE (FFG-27)	11/19/90	/ /	YES
N62791-0333-7416	N62791-91-M-0089		AZTEC NETWORK SOLUTIONS	CODE 105	11/29/90	12/19/90	YES
N62791-0341-7438	N62791-91-M-0109		NUMERIDEX, INC.	CODE 210	12/17/90	12/17/90	YES
N62791-0341-7439	N62791-91-M-0109		NUMERIDEX, INC.	CODE 210	12/17/90	12/17/90	YES
N62791-0341-7440	N62791-91-M-0109		NUMERIDEX, INC.	CODE 210	12/17/90	12/17/90	YES
N62791-0341-7441	N62791-91-M-0109		NUMERIDEX, INC.	CODE 210	12/17/90	12/17/90	YES
N62791-0345-7443	N62791-91-M-0112		CAMERA MART	CODE 230B	12/11/90	12/11/90	YES
N62791-0346-7449	N62791-91-M-0114		GROVE OFFICE SUPPLY	CODE 240S	12/18/90	12/14/90	YES
N62791-0347-7451	N62791-91-M-0115		CHULA VISTA STATIONERS	CODE 240S, STOREROOM	12/17/90	12/18/90	YES
N62791-0351-7454	N62791-91-M-0110		OCE-INDUSTRIES INC.	CODE 511	12/18/90	12/18/90	YES
N62791-9206-R119	N00244-90-A-3896	018A	DATEL SYSTEMS INC	CODE 540	08/02/90	08/03/90	YES
N62791-9258-S010	N62791-90-M-0006		EDP PRODUCTS INC.	CODE 1011S	10/01/89	05/31/90	YES

********** END OF REPORT **********

LINE ITEM USAGE REPORT

PAGE : 1 CONTRACT : N00123-88-D-5339 REPORT PERIOD

DATE PREPARED : 90.10.16 88.01.01-90.10.15

LINE ITEM	USAGE	QUANTITY	UI	UNIT PRICE	TOT. AMOUNT
CLIN 0059AB	1	21.0	LF	.7000	14.70
CLIN 0060AB	1	14.0	LF	.7000	9.80
CLIN 0065AB	1	6.0	LF	.8000	4.80
CLIN 0072AB	1	2.0	EA	35.3500	70.70
CLIN 0073AB	1	2.0	EA	35.3500	70.70
CLIN 0076AB	1	5.0	EA	59.2500	296.25
CLIN 0085AB	1	189.0	SF	18.5000	3496.50
CLIN 0088	2	9.0	EA	2500.0000	22500.00
CLIN 0095AB	1	12.0	LF	.1000	1.20
CLIN 0096AC	1	1.0	LF	.1000	.10
CLIN 0097AB	1	27.0	LF	.1000	2.70
CLIN 0100AB	1	17.0	LF	.1000	1.70
CLIN 0100AC	1	2.0	LF	.1000	.20
CLIN 0102AB	1	15.0	LF	.1000	1.50
CLIN 0104AC	1	8.0	LF	.1000	.80
CLIN 0108AB	1	2.0	LF	.5000	1.00
CLIN 0110AB	1	4.0	LF	.5000	2.00
CLIN 0113AB	1	2.0	LF	.5000	1.00
CLIN 0115AB	1	2.0	LF	.5000	1.00
CLIN 0117AC	1	1.0	EA	.0100	.01
CLIN 0119AB	1	5.0	SF	.5000	2.50
CLIN 0119AC	1	10.0	SF	.5000	5.00
CLIN 0151AB	28	864.0	LF	.7000	604.80
CLIN 0152AB	15	246.0	LF	.7000	172.20
CLIN 0152AC	3	12.0	LF	.7000	8.40
CLIN 0153AB	24	414.0	LF	.7000	289.80
CLIN 0153AC	1	1.0	LF	.7000	.70
CLIN 0154AB	13	154.0	LF	.7500	115.50
CLIN 0155AB	10	111.0	LF	.7500	83.25
CLIN 0155AC	3	34.0	LF	.7500	25.50
CLIN 0156AB	16	148.0	LF	.8000	118.40
CLIN 0156AC	4	28.0	LF	.9000	25.20
CLIN 0157AB	8	107.0	LF	.8000	85.60
CLIN 0157AC	2	5.0	LF	.9000	4.50
CLIN 0158AB	9	86.0	LF	.8500	73.10
CLIN 0158AC	1	6.0	LF	.8500	5.10
CLIN 0159AB	1	18.0	LF	.8500	15.30
CLIN 0160AA	1	40.0	LF	.0200	.80
CLIN 0160AB	6	62.0	LF	.9000	55.80
CLIN 0161AB	2	10.0	LF	1.0000	10.00
CLIN 0162AB	9	74.0	LF	1.0000	74.00
CLIN 0163AB	2	13.0	LF	1.0000	13.00
CLIN 0164AB	28	1916.0	EA	35.3500	67730.60
CLIN 0164AC	3	37.0	EA	.0200	.74
CLIN 0165AB	20	487.0	EA	35.3500	17215.45
CLIN 0165AC	6	31.0	EA	35.3500	1095.85
CLIN 0166AB	27	728.0	EA	35.8000	26062.40
CLIN 0166AC	12	133.0	EA	35.8000	4761.40
CLIN 0167AB	19	315.0	EA	50.9500	16049.25

CIS LINE ITEMS
FOR CONTRACT N00123-88-D-5252

CONTRACT	LINE ITEM	UI	UNIT PRICE	NOMENCLATURE	MFR PART NO.	DISC.	SVC	ADP	REMARKS
N00123-88-D-5252	0035	SF	0.58	CLIN 0035 : REMOVE MIL-D-23003, MIL-D-24483, AND TWO PART POLYURETHANE NON-SKID DECK COVERING IN ACCORDANCE WITH SECTION 'C' HEREIN.		0.00	Y	N	
N00123-88-D-5252	0036	SF	0.54	CLIN 0036 : REMOVE THREE PART POLY-URETHANE TYPE NONSKID DECK COVERING IN ACCORDANCE WITH SECTION 'C' HEREIN.		0.00	Y	N	
N00123-88-D-5252	0037	SF	0.46	CLIN 0037 : REMOVE DOD-C-24667 TYPE I, II, AND III DECK COVERING TEST PATCHES IN ACCORDANCE WITH SECTION 'C' HEREIN.		0.00	Y	N	
N00123-88-D-5252	0038AA	SF	1.72	CLIN 0038AA : ROLL ON APPLICATION METHOD		0.00	Y	N	
N00123-88-D-5252	0038AB	SF	1.14	CLIN 0038AB : TROWEL ON APPLICATION METHOD.		0.00	Y	N	
N00123-88-D-5252	0039AA	SF	2.30	CLIN 0039AA : ROLL ON APPLICATION METHOD AREAS OF UP TO 15,000 SQUARE FEET.		0.00	Y	N	
N00123-88-D-5252	0039AB	SF	1.57	CLIN 0039AB : ROLL ON APPLICATION METHOD AREAS OF OVER 15,000 SQUARE FEET.		0.00	Y	N	
N00123-88-D-5252	0039AC	SF	1.72	CLIN 0039AC : TROWEL ON APPLICATION METHOD.		0.00	Y	N	
N00123-88-D-5252	0040AA	SF	1.62	CLIN 0040AA : ROLL ON APPLICATION METHOD.		0.00	Y	N	
N00123-88-D-5252	0040AB	SF	1.15	CLIN 0040AB : TROWEL ON APPLICATION METHOD.		0.00	Y	N	
N00123-88-D-5252	0041	SF	1.15	CLIN 0041 : APPLY SPRAY-ON NON-SKID DECK COVERING CONFORMING TO TO MIL-D-24483, TYPE I TO STEEL SURFACES OF DECKS OTHER THAN THE HELICOPTER LANDING AND VERTREP AREAS IN ACCORDANCE WITH SECTION 'C' HEREIN.		0.00	Y	N	

COST CODE	REQUISITION	UI	QTY	EST. U/P	REQN RCVD	NOMENCLATURE
02600100717T	M00371-1309-A002	EA	2	1600.00	11/13/91	CANON PC-70 READER-PRINTER,SINGLE LENS, MASKING,IMAGE ROTATION,ONE TONER CARTRIDGE, & 24X LENS.
02600100717T	M00371-1309-A015	EA	1	551.00	11/22/91	ALPS P2000+9 PIN DOT MATRIX PRINTER WITH CABLES.
02600100717T	M00371-1309-A025	EA	1	2500.00	11/14/91	MAINTENCE CONTRACT:REFILLING,SERVICING, HYDROSTATIC TESTING,AND REPLACEMENT OF CHARGE CARTRIDGE(WHEN NEEDED).
02600100717T	M00371-1310-A026	EA	4	525.00	11/14/91	CANON AP160 ELECTRIC TYPEWRITER

TOTAL REQUISITIONS: 4 (OF WHICH 4 ARE OVER 30 DAYS OLD)

DATE PREPARED : 02/04/92

REQUISITION FILE STATUS (BY COSTCODE)
CUSTOMER: 001
(ITEMS REQUISITIONED BETWEEN 10/15/91 AND 10/30/91)

COST CODE	PIIN	CALL / DELIVERY	REQUISITION	UI	QTY	UNIT PRICE	EXT AMOUNT	NOMENCLATURE	VENDOR
0012771694KZ	N62974-91-A-0254	0020	R57082-1277-1694	BX	5	42.00	210.00	PRINTER RIBBON, HONEYWELL 6 PER BOX GS-00F-4063A	FEDERAL SALES SERVICE
0012771695KZ	N62974-91-A-0254	0020	R57082-1277-1695	EA	54	1.98	106.92	COMPUTING RIBBON HONEYWELL GS-00F-4063A	FEDERAL SALES SERVICE
0012803V00KZ	N62974-92-M-7019		R57082-1289-3V00	LT	1	500.00	500.00	SEAL, NON METALIC, BLACK, 299 12" SEGMENTS, NON BAR CODED	KIRKILL RUBBER CO.
0012818T00KZ	N62974-91-A-0254	0020	R57082-1281-8T00	DZ	1	23.40	23.40	PRINTER RIBBON NUKOTE GS-00F-4063A	FEDERAL SALES SERVICE
0012818T02KZ	N62974-92-M-2024		R57082-1281-8T02	EA	1	60.77	60.77	IDE CONTROLLER BOARD	SWAN TECHNOLOGIES
0012821675KZ	N62974-92-M-7013		R57082-1282-1675	EA	300	3.40	1020.00	FLAT WASHER	JAMICO
0012891680KZ	N62974-91-A-0333	0009	R57082-1289-1680	EA	20	11.58	231.60	PRINTER CARTRIDGES-KODAK	COMPUTER WORLD
0012891696KZ	N62974-92-M-2028		R57082-1289-1696	GL	2	91.50	183.00	GLOSS CLEANER	MICRO-SURFACE FINISHING P
0012890P95KZ	N62974-91-A-0300	0004	R57082-1289-DP95	EA	2	65.20	130.40	HETRA 3300N TECH MANUAL PRICE INCLUDES 3.5% TAX	CREST COMPUTER SUPPLY
001289MA00KZ	N62974-92-M-9009		R57082-1289-MA00	JB	1	198.00	198.00	REWIND MOTOR, DOER INC. 3 PHASE ELECTRIC, 208V, 60HZ, 2 HP	DELF'S ELECTRIC MOTORS
001290AR55YA	N62974-91-A-0060	0003	R57082-1290-AR55	EA	9	9.87	88.83	STEEL ROD, 9/16, 20FT LONG	BRITAIN'S STEEL & SUPPLIE
001290AR55YA	N62974-91-A-0052	0009	R57082-1290-AR56	EA	110	4.55	500.50	LUMBER,4" X 4" X 8' DOUGLAS FIR	SOUTHWEST LUMBER & HARDWA
0012917H00KZ	N62974-92-M-7018		R57082-1291-7H00	EA	1	280.00	280.00	DRAIN BOTTLE, ASSY	HEAT EXCHANGERS INC
0012917H01KZ	N62974-92-M-7018		R57082-1291-7H01	EA	1	280.00	280.00	DRAIN BOTTLE, ASSY	HEAT EXCHANGERS INC
0012917H02KZ	N62974-92-M-7018		R57082-1291-7H02	EA	1	280.00	280.00	DRAIN BOTTLE, ASSY	HEAT EXCHANGERS INC
0012918T04KZ	N62974-92-M-2030		R57082-1291-8T04	EA	1	2542.50	2542.50	ADVANCED IBM 3270/SNA (32 SESSIONS)	INTEGRATION SPECIALIST IN
0012918T05KZ	N62974-91-A-0320	0006	R57082-1291-8T05	EA	4	600.00	2400.00	MODEM, PARADYNE 9600 BAUD	LOS ALTOS NETWORKING, INC
001295MA00KZ	N62974-91-A-0040	0024	R57082-1295-MA00	EA	2	35.00	70.00	TYPEWRITER REPAIRS, LOCATED AT MALS-13, VAN PAD B, POC: CWO4 GIEDT, 726-2197 SERIAL #6705116346967 SERIAL #0829638	
001295MA51KZ	N62974-91-A-0188	0011	R57082-1295-MA51	BX	6	18.18	109.08	PRINTER RIBBON, FOR THE EPSON LQ-2550 PRINTER.	WORD TECHNOLOGY SYSTEMS
001295MA52KZ	N62974-91-A-0067	0009	R57082-1295-MA52	BX	4	1.75	7.00	ADHESIVE DOTS, 1/4", 1000 EACH PER BOX RED PRICE INCLUDES 3.5% TAX	YUMA OFFICE SUPPLY
001295MA53KZ	N62974-91-A-0067	0009	R57082-1295-MA53	BX	4	1.75	7.00	ADHESIVE DOTS, 1/4", 1000 EACH PER BOX GREEN PRICE INCLUDES 3.5% TAX	YUMA OFFICE SUPPLY
001295MA54KZ	N62974-91-A-0067	0009	R57082-1295-MA54	BX	4	1.75	7.00	ADHESIVE DOTS, 1/4", 1000 EACH PER BOX BLUE PRICE INCLUDES 3.5% TAX	YUMA OFFICE SUPPLY
001295MA55KZ	N62974-91-A-0067	0009	R57082-1295-MA55	BX	4	1.75	7.00	ADHESIVE DOTS, 1/4", 1000 EA PER BOX YELLOW PRICE INCLUDES 3.5% TAX	YUMA OFFICE SUPPLY

PAGE : 1
DATE PREPARED : 02/04/92

REQUISITION FILE STATUS (BY CUSTOMER)
CUSTOMER: 00307
(ITEMS REQUISITIONED BETWEEN 10/15/91 AND 10/30/91)

COST CODE	PIIN	CALL / DELIVERY	REQUISITION	EDD	UI	QTY	UNIT PRICE	EXT AMOUNT	NOMENCLATURE	VENDOR
2500100CS00T	M62974-92-Y-7007		M00307-1290-0001	10/17/91	BG	70	2.95	206.50	ROCK SALT(CONDUCTIVE)	GREGSTON'S FEED & SUPPLY
2500100CS00T	M62974-92-Y-7014		M00307-1297-0001	11/01/91	EA	8	17.46	139.68	ICE CHEST, 48 QT PRICE INCLUDES 3.25% TAX CANCELLED 11-04-91,DEL.DATE COULD NOT BE MET BY VENDOR.	POPULAR SURPLUS

DATE PREPARED: 02/04/92 BUYER SUMMARY REPORT PAGE: 1

ITEMS REQUISITIONED BETWEEN 10/15/91 AND 10/30/91

BUYER 00 HAS BEEN ASSIGNED 9 REQUISITIONS.
OF THOSE, 3 HAVE BEEN PLACED.
AND 6 ARE STILL IN PROCESS.

BUYER 01 HAS BEEN ASSIGNED 2 REQUISITIONS.
OF THOSE, 1 HAVE BEEN PLACED.
AND 1 ARE STILL IN PROCESS.

BUYER 02 HAS BEEN ASSIGNED 49 REQUISITIONS.
OF THOSE, 49 HAVE BEEN PLACED.
AND 0 ARE STILL IN PROCESS.

BUYER 03 HAS BEEN ASSIGNED 17 REQUISITIONS.
OF THOSE, 17 HAVE BEEN PLACED.
AND 0 ARE STILL IN PROCESS.

BUYER 05 HAS BEEN ASSIGNED 49 REQUISITIONS.
OF THOSE, 49 HAVE BEEN PLACED.
AND 0 ARE STILL IN PROCESS.

BUYER 07 HAS BEEN ASSIGNED 100 REQUISITIONS.
OF THOSE, 100 HAVE BEEN PLACED.
AND 0 ARE STILL IN PROCESS.

BUYER 08 HAS BEEN ASSIGNED 16 REQUISITIONS.
OF THOSE, 16 HAVE BEEN PLACED.
AND 0 ARE STILL IN PROCESS.

BUYER 09 HAS BEEN ASSIGNED 57 REQUISITIONS.
OF THOSE, 57 HAVE BEEN PLACED.
AND 0 ARE STILL IN PROCESS.

ALL BUYERS HAVE PLACED 292 REQUISITIONS.
AND HAVE 7 PENDING.

PAGE : 1
DATE PREPARED : 02/04/92

REQUISITION FILE STATUS
BUYER: 00
(ITEMS REQUISITIONED BETWEEN 10/15/91 AND 10/30/91)

COST CODE	PIIN	CALL / DELIVERY	REQUISITION	UI	QTY	UNIT PRICE	EXT AMOUNT	NOMENCLATURE	VENDOR
2500100CS00T	N62974-92-Y-7014		M00307-1297-0001	EA	8	17.46	139.68	ICE CHEST, 48 QT PRICE INCLUDES 3.25% TAX CANCELLED 11-04-91,DEL.DATE COULD NOT BE MET BY VENDOR.	POPULAR SURPLUS
6809429YUPHT			N62974-1284-FZ64	BT	12	.00	.00	BLEPHAMIDE OPHTHALMIC SUSPENSION CANCELLED OCTOBER 28,1991	XXX
0TK9111TK00T			X62974-1284-DV48	EA	100	.00	.00	BATTERY NONRECHARGEABLE BA 3553U CANCELLED 10/17/91 - ITEM IS OBSOLETE - NO REPLACEMENT.	XXX
0P84518P806T	N62974-88-A-0234	0077	X62974-1288-FH18	EA	1	343.94	343.94	STEERING AXLE PIN CANCELLED ON 11-04-91,BY REQUEST, PER STAN.	NAUMAN/HOBBS MATERIAL HAN
0A22600A236T			X62974-1296-EW13	EA	12	.00	.00	UNISYS PRINTER RIBBON CANCELLED 10-30-91,CARRIED IN STOCK.	XXX
0TK9110TK00T			X62974-1298-DV08	TU	20	.00	.00	GAA GREASE CANCELLED BACK TO UNIT-NOT AVAILABLE IN TUBES	XXX
0P84518P806T	N62974-91-A-0234	0002	X62974-1298-FH01	EA	2	24.21	48.42	BUSHING, STEERING AXLE 1986 HYSTER F/L CANCELLED 11-04-91,BY REQUEST.	NAUMAN/HOBBS MATERIAL HAN
0P44841P420T			X62974-1298-FL04	EA	1	.00	.00	PRACTICAL GUIDE CANCELLED 11-04-91,BOOK NO LONGER AVAIBLE.	XXX
08724008763T			X62974-1301-EE01	SW	1	.00	.00	1 YEAR SUBSCRIPTION TO THE ARIZONA REPUBLIC--TO BE HAND DELIVERED TO BLDG.970. CANCELLED 11-04-91,PER REQUEST.	XXX

DATE PREPARED: 02/04/92 BACK LOG REPORT PAGE: 3
BUYER: 03

COST CODE	REQUISITION	UI	QTY	EST. U/P	REQN RCVD	NOMENCLATURE
242010071HQT	M00013-1308-0091	EA	2	68.00	11/13/91	MAINTENANCE CONTRACT:SAVIN 9250 COPIERS FOR PERIOD OF 1-29-91 THRU 1-29-93.
026001007171	M00371-1309-A002	EA	2	1600.00	11/13/91	CANON PC-70 READER-PRINTER,SINGLE LENS, MASKING,IMAGE ROTATION,ONE TONER CARTRIDGE, & 24X LENS.
026001007171	M00371-1310-A026	EA	4	525.00	11/14/91	CANON AP160 ELECTRIC TYPEWRITER
2328205000ST	M04802-1318-0008	BX	2	25.20	11/20/91	1/2" LETTERS FOR FELT MESSAGE BOARD.
BK212010710T	M28357-1319-0764	CT	3	720.00	11/20/91	COPY CARTRIDGE FOR XEROX 5028 COPIER.
J35100000090	N62974-1311-9763	BX	25	3.50	11/13/91	SWINTEC CORRECTION RIBBON.
J35100000090	N62974-1311-9764	DZ	6	20.42	11/13/91	SWINTEC TYPEWRITER RIBBON.
J351000000PQ	N62974-1317-9754	BX	10	115.00	11/14/91	THERMAL FAX PAPER
J35100000090	N62974-1322-9751	EA	180	1.10	11/20/91	URINAL SCREEN,DEORDERIZED
J35100000090	N62974-1322-9752	TU	48	.97	11/20/91	NEOSPORIN OINTMENT 1OZ. TUBE
J3510000009L	N62974-1322-9753	PG	2	44.00	11/20/91	X-RAY FILTER
0C12102C165T	X62974-1281-EH01	BX	1	15.00	11/13/91	PLOTTER SUPPLIES
0C12102C165T	X62974-1281-EH02	BX	1	10.00	11/13/91	PLASTIC BINDS
0C12102C165T	X62974-1281-EH03	BX	1	10.00	11/13/91	PLASTIC BINDS
0A12052A187W	X62974-1308-FF01	EA	10	11.00	11/13/91	3 RING DISK HOLDERS
0TK9110TK00T	X62974-1316-DV27	RO	18	29.95	11/20/91	LAMINATION PAPER
0C12102C165T	X62974-1319-EH01	PK	6	120.00	11/20/91	POSTAGE METER TAPE
0TK9110TK00T	X62974-1323-DV32	BX	48	23.55	11/21/91	TRANSPARENCY FILM

TOTAL REQUISITIONS: 18 (OF WHICH 18 ARE OVER 30 DAYS OLD)

APPENDIX E

SAMPLE RFQ.TXT FILE PRINTOUTS

RFQ.TXT

(Generated by APADE)

```
***DJDE***JDE=104,COPIES=0001,FORMS=SF18A,PMODE=PORTRAIT,ASSIGN=(1,5),ASSIGN=(2,16),ASSIGN=(3,33),ASSIGN=(4,85),;
***DJDE***FONTS=((P06BOB,8),(UN118B,8),(P07TCB,8)),END;
1                                   X                                                                  1
1
3     N00244-92-Q-6516    92 FEB 05        92036-GDGT                                  DO-C9E
1
1     NAVAL SUPPLY CENTER
1     937 N. Harbor Drive                                                  92 FEB 20
1     San Diego, CA   92132-5044
1     BUYER: J. DUNKER 2007.JD              PHONE: 619-556-8510          X
1
1     EASE DISTRIBUTION GROUP 89
1     Naval Supply Center
1     San Diego, CA   92132
1
1                                                                                    SEE SCHEDULE
1      92 FEB 07
1
1
1
1
1
1
1
1
1            VETS INSPECTION REQUIRED PRIOR TO DELIVERY IAW USDC
1            APPROVED LISTS
1    CAGE  EAZ89       ESTABLISHMENT
***DJDE***FORMS=SF18B,PMODE=PORTRAIT,END;

***DJDE***ASSIGN=(1,6),ASSIGN=(2,12),FORMS=CONTA,;

***DJDE***FONTS=((UN311E,8),(P07TCB,8),(P07TCB,7),(P07TBC,7),(P08SCA,7),(UN205E,7),(ITA06E,7),(PR111B,7),(2143B
P,7)),END;
2                                         N00244-92-Q-6516                          3
1     SECTION B - SUPPLIES OR SERVICES AND PRICES
1
1     ITEM NO. SUPPLIES/SERVICES                          QUANTITY  UNIT   UNIT PRICE     AMOUNT
2
2     0001    NSN/LSN 9M 8920-01-210-2774                 320    BX
2
2            SUBSISTENCE
2
3            PACKAGE ASSORTMENT INSTANT ROLLED OATS CEREAL
3            INDIVIDUAL SERVING SIZE PACKAGES, 2 PACKAGES OF
3            REGULAR, APPLE AND CINNAMON, MAPLE AND BROWN SUGAR,
3            CINNAMON AND SPICE, AND FRUIT AND CREAM PER
3            INTERMEDIATE CONTAINER, 12 INTERMEDIATE CONTAINERS PER
3            SHIPPING BOX, CID A-A-20090, FLAVORS A, B, C, D, E,
3            AND/OR F.
```

2
2 INSPECT AT DESTINATION INSPECT BY RECEIVER
2 ACCEPT AT DESTINATION ACCEPT BY RECEIVER
2
2 DELY DATE 92 FEB 20
2
2 SHIP TO R2111801
2 R21118
2 Receiving Officer (s-1)
2 Uss Mckee (as-41)
2 Bldg. 511 Subase Ballast Point
2 San Diego, CA 92106
2
2 MARK FOR R21118-2034-9E67 NON-MILSTRIP
2 R21118
2 USS MCKEE
2 As-41
2 Fpo
2 San Francisco, CA 96621
2
2 TP 3 RDD 92 FEB 20
2
2 0002 NSN/LSN 9M 8925-00-782-3318 960 PG
2
2 SUBSISTENCE
2
3 COOKING CHOCOLATE
3 SEMISWEET, CHIPS (DROPS), 12 OZ PACKAGE, ADCOP.
2
2 INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001
2
2 DELY DATE 92 FEB 20
2
2 SHIP TO ADDRESS SAME AS CLIN 0001
2 MARK FOR R21118-2034-9G70 NON-MILSTRIP
2 MARK FOR ADDRESS SAME AS CLIN 0001
2 ADDL MARKING/SHIPPING SAME AS CLIN 0001
2
2
2 0003 NSN/LSN 9M 8920-00-043-5352 100 CO
2
2 SUBSISTENCE
2
3 TACO SHELLS
3 CORN, FRESH, DEEP FRIED, PREFORMED INTO A RECEPTACLE
3 SUITABLE FOR FILLING, 200 PER SHIPPING CONTAINER, CID
3 A-A-20143, SALIENT CHARACTERISTICS ITEM 5.

1 ITEM NO. SUPPLIES/SERVICES QUANTITY UNIT UNIT PRICE AMOUNT
2
2
2 INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001
2
2 DELY DATE 92 FEB 20

2

2 SHIP TO ADDRESS SAME AS CLIN 0002
2 MARK FOR R21118-2034-9G29 NON-MILSTRIP
2 MARK FOR ADDRESS SAME AS CLIN 0002
2 ADDL MARKING/SHIPPING SAME AS CLIN 0001
2
2
2 0004 NSN/LSN 9M 8960-01-069-6662 400 PG
2
2 SUBSISTENCE
2
3 BEVERAGE BASE
3 POWDER, LEMONADE, IMITATION BASE, UNSWEETENED,
3 W/ASCORBIC ACID, 5 GALLON YIELD PACKAGE, 80 PACKAGES
3 PER INTERMEDIATE BOX, 2 INTERMEDIATE BOXES PER SHIPPING
3 CONTAINER, CID A-A-20098, TYPE II, CLASS A, FLAVOR S.
2
2 INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001
2
2 DELY DATE 92 FEB 20
2
2 SHIP TO ADDRESS SAME AS CLIN 0003
2 MARK FOR R21118-2034-9P66 NON-MILSTRIP
2 MARK FOR ADDRESS SAME AS CLIN 0003
2 ADDL MARKING/SHIPPING SAME AS CLIN 0001
2
2
2 0005 NSN/LSN 9M 8960-00-216-6131 30000 EA
2
2 SUBSISTENCE
2
3 COCOA BEVERAGE POWDER
3 NONFORTIFIED, NOT MORE THAN 600 1 OZ PACKAGES PER
3 SHIPPING CONTAINER, ADCOP.
2
2 INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001
2
2 DELY DATE 92 FEB 20
2
2 SHIP TO ADDRESS SAME AS CLIN 0004
2 MARK FOR R21118-2034-9P92 NON-MILSTRIP
2 MARK FOR ADDRESS SAME AS CLIN 0004
2 ADDL MARKING/SHIPPING SAME AS CLIN 0001
2
2
2 0006 NSN/LSN 9M 8925-01-015-6776 480 CN
2
2 SUBSISTENCE
2
3 SHELLED PEANUTS
3 SPANISH, UNBLANCHED, ROASTED, SALTED, U.S. #1 GRADE, 6
3 OR 6 1/2 OZ CAN, CID A-A-20164, TYPE IV (B), STYLE 1.
2
2

	ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
2						
2		INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001				
2						
2		DELY DATE 92 FEB 20				
2						
2		SHIP TO ADDRESS SAME AS CLIN 0005				
2		MARK FOR R21118-2034-9H06 NON-MILSTRIP				
2		MARK FOR ADDRESS SAME AS CLIN 0005				
2		ADDL MARKING/SHIPPING SAME AS CLIN 0001				
2						
2						
2	0007	NSN/LSN 9M 8940-00-080-6047	240	CN		
2						
2		SUBSISTENCE				
2						
3		SEASONING MIX				
3		TACO, #2 1/2 CAN, MIL-S-43919, TYPE IV, CLASS 5.				
2						
2		INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001				
2						
2		DELY DATE 92 FEB 20				
2						
2		SHIP TO ADDRESS SAME AS CLIN 0006				
2		MARK FOR R21118-2034-9K59 NON-MILSTRIP				
2		MARK FOR ADDRESS SAME AS CLIN 0006				
2		ADDL MARKING/SHIPPING SAME AS CLIN 0001				
2						
2						
2	0008	NSN/LSN 9M 8950-01-155-6996	240	CO		
2						
2		SUBSISTENCE				
2						
3		ONION POWDER				
3		W/ADDED ANTICAKING AGENT, 1 LB CONTAINER, OFFICIAL				
3		STANDARDS AND METHODS OF THE AMERICAN DEHYDRATED ONION				
3		AND GARLIC ASSOCIATION (ADOGA).				
2						
2		INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001				
2						
2		DELY DATE 92 FEB 20				
2						
2		SHIP TO ADDRESS SAME AS CLIN 0007				
2		MARK FOR R21118-2034-9N37 NON-MILSTRIP				
2		MARK FOR ADDRESS SAME AS CLIN 0007				
2		ADDL MARKING/SHIPPING SAME AS CLIN 0001				
2						
2						
2	0009	NSN/LSN 9M 8920-00-173-2462	300	LB		
2						
2		SUBSISTENCE				
2						
3		CHOCOLATE CHIP COOKIES				
3		ADCOP				

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT

VARIATION IN QTY 3% OVER 3% UNDER

INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001

DELY DATE 92 FEB 20

SHIP TO ADDRESS SAME AS CLIN 0008
MARK FOR R21118-2034-9E92 NON-MILSTRIP
MARK FOR ADDRESS SAME AS CLIN 0008
ADDL MARKING/SHIPPING SAME AS CLIN 0001

0010 NSN/LSN 9M 8920-00-616-0044 300 LB

SUBSISTENCE

SANDWICH COOKIES
CREAM FILLING, CHOCOLATE FLAVOR, VANILLA FLAVOR, OR
COMBINATION BASE CAKES, ADCOP.

VARIATION PROVISIONS SAME AS CLIN 0009

INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001

DELY DATE 92 FEB 20

SHIP TO ADDRESS SAME AS CLIN 0009
MARK FOR R21118-2034-9F03 NON-MILSTRIP
MARK FOR ADDRESS SAME AS CLIN 0009
ADDL MARKING/SHIPPING SAME AS CLIN 0001

0011 NSN/LSN 9M 8920-00-543-6689 150 LB

SUBSISTENCE

COCONUT MACAROON COOKIES
ADCOP

VARIATION PROVISIONS SAME AS CLIN 0009

INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001

DELY DATE 92 FEB 20

SHIP TO ADDRESS SAME AS CLIN 0010
MARK FOR R21118-2034-9E94 NON-MILSTRIP
MARK FOR ADDRESS SAME AS CLIN 0010
ADDL MARKING/SHIPPING SAME AS CLIN 0001

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0012	NSN/LSN 9M 8925-00-149-1367 SUBSISTENCE SHELLED CASHEW NUTS WHOLE, SALTED, NOT LESS THAN 240 NOR MORE THAN 320 COUNT PER LB, 8 OZ CAN, CID A-A-20164, TYPE VI, STYLE I. INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001 DELY DATE 92 FEB 20 SHIP TO ADDRESS SAME AS CLIN 0011 MARK FOR R21118-2034-9G67 NON-MILSTRIP MARK FOR ADDRESS SAME AS CLIN 0011 ADDL MARKING/SHIPPING SAME AS CLIN 0001	480	CN		
0013	NSN/LSN 9M 8940-01-088-9076 SUBSISTENCE CANNED BEEF STEW W/VEGETABLES, #10 CAN, NOT LESS THAN 25% MEAT IN ACCORDANCE WITH USDA STANDARDS FOR MEAT AND POULTRY PRODUCTS. INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001 DELY DATE 92 FEB 20 SHIP TO ADDRESS SAME AS CLIN 0012 MARK FOR R21118-2034-9J79 NON-MILSTRIP MARK FOR ADDRESS SAME AS CLIN 0012 ADDL MARKING/SHIPPING SAME AS CLIN 0001	240	CN		
0014	NSN/LSN 9M 8950-00-080-9873 SUBSISTENCE NONALCOHOLIC IMITATION ALMOND FLAVORING 8 FLUID OZ BOTTLE, CID A-A-20167 INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001 DELY DATE 92 FEB 20 SHIP TO ADDRESS SAME AS CLIN 0013	120	BT		

2 MARK FOR R21118-2034-9M60 NON-MILSTRIP
2 MARK FOR ADDRESS SAME AS CLIN 0013
2 ADDL MARKING/SHIPPING SAME AS CLIN 0001
2
2
2 0015 NSN/LSN 9M 8950-00-480-4542 240 BT
2
2 SUBSISTENCE
2
3 NONALCOHOLIC IMITATION BANANA FLAVORING
3 8 FLUID OZ BOTTLE, CID A-A-20167
2
2 INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001
2
2 DELY DATE 92 FEB 20
2
2 SHIP TO ADDRESS SAME AS CLIN 0014
2 N00244-92-Q-6516 8
1 ITEM NO. SUPPLIES/SERVICES QUANTITY UNIT UNIT PRICE AMOUNT
2
2 MARK FOR R21118-2034-9M61 NON-MILSTRIP
2 MARK FOR ADDRESS SAME AS CLIN 0014
2 ADDL MARKING/SHIPPING SAME AS CLIN 0001
2
2
2 0016 NSN/LSN 9M 8950-00-419-4321 120 BT
2
2 SUBSISTENCE
2
3 NONALCOHOLIC IMITATION BLACK WALNUT FLAVORING
3 8 OZ FLUID BOTTLE, CID A-A-20167
2
2 INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001
2
2 DELY DATE 92 FEB 20
2
2 SHIP TO ADDRESS SAME AS CLIN 0015
2 MARK FOR R21118-2034-9M62 NON-MILSTRIP
2 MARK FOR ADDRESS SAME AS CLIN 0015
2 ADDL MARKING/SHIPPING SAME AS CLIN 0001
2
2
2 0017 NSN/LSN 9M 8950-00-480-4543 120 BT
2
2 SUBSISTENCE
2
3 NONALCOHOLIC IMITATION BRANDY FLAVORING
3 8 FLUID OZ BOTTLE, CID A-A-20167
2
2 INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001
2
2 DELY DATE 92 FEB 20
2
2 SHIP TO ADDRESS SAME AS CLIN 0016

MARK FOR R21118-2034-9M63 NON-MILSTRIP
MARK FOR ADDRESS SAME AS CLIN 0016
ADDL MARKING/SHIPPING SAME AS CLIN 0001

0018 NSN/LSN 9M 8950-00-080-5958 120 BT

SUBSISTENCE

NONALCOHOLIC IMITATION PEPPERMINT FLAVORING
NONCOLORED, 8 FLUID OZ BOTTLE, CID A-A-20167

INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001

DELY DATE 92 FEB 20

SHIP TO ADDRESS SAME AS CLIN 0017
MARK FOR R21118-2034-9M59 NON-MILSTRIP
MARK FOR ADDRESS SAME AS CLIN 0017
ADDL MARKING/SHIPPING SAME AS CLIN 0001

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT

0019 NSN/LSN 9M 8950-00-062-8137 120 BT

SUBSISTENCE

NONALCOHOLIC IMITATION RUM FLAVORING
16 FLUID OZ BOTTLE, CID A-A-20167

INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001

DELY DATE 92 FEB 20

SHIP TO ADDRESS SAME AS CLIN 0018
MARK FOR R21118-2034-9M69 NON-MILSTRIP
MARK FOR ADDRESS SAME AS CLIN 0018
ADDL MARKING/SHIPPING SAME AS CLIN 0001

0020 NSN/LSN 9M 8950-00-616-5475 120 BT

SUBSISTENCE

NONALCOHOLIC ORANGE FLAVORING
8 FLUID OZ BOTTLE, CID A-A-20167

INSPECTION/ACCEPTANCE PROVISIONS SAME AS CLIN 0001

DELY DATE 92 FEB 20

SHIP TO ADDRESS SAME AS CLIN 0019
MARK FOR R21118-2034-9M67 NON-MILSTRIP

MARK FOR ADDRESS SAME AS CLIN 0019
ADDL MARKING/SHIPPING SAME AS CLIN 0001

SECTION E - INSPECTION AND ACCEPTANCE

	CLAUSE TITLE	REFERENCE		DATE
1.	RESPONSIBILITY FOR SUPPLIES	52.246-16	E0A015	84 APR

SECTION F - DELIVERIES OR PERFORMANCE

52.212-1C F7A002 DELIVERY OF EXCESS QUANTITIES

The Contractor is responsible for the delivery of each item quantity within allowable variations, if any. If the Contractor delivers and the Government receives quantities of any item in excess of the quantity called for (after considering any allowable variation in quantity), such excess quantities will be treated as being delivered for the convenience of the Contractor. The Government may retain such excess quantities up to $250 in value without compensating the Contractor therefor, and the Contractor waives all right, title, or interests therein. Quantities in excess of $250 will, at the option of the Government, either be returned at the Contractor's expense or retained and paid for by the Government at the contract unit price.

SECTION I - CONTRACT CLAUSES

	CLAUSE TITLE	REFERENCE		DATE
1.	ANTI-KICKBACK PROCEDURES	52.203-7	I0A002	88 OCT
2.	OFFICIALS NOT TO BENEFIT	52.203-1	I0A003	84 APR
3.	GRATUITIES	52.203-3	I0A004	84 APR
4.	COVENANT AGAINST CONTINGENT FEES	52.203-5	I0A005	84 APR
5.	NEW MATERIAL	52.210-5	I0A018	84 APR
6.	NOTICE OF SMALL BUSINESS-SMALL PURCHASE SET-ASIDE	52.219-4	I0A069	88 AUG
7.	BUY AMERICAN ACT -- SUPPLIES	52.225-3	I0A098	89 JAN
8.	PAYMENTS	52.232-1	I0A137	84 APR
9.	DISCOUNTS FOR PROMPT PAYMENT	52.232-8	I0A145	89 APR
10.	DISPUTES	52.233-1	I0A159	84 APR
11.	CONTRACTOR INSPECTION REQUIREMENTS	52.246-1	I0A216	84 APR
12.	PROMPT PAYMENT	52.232-25	I0A422	89 APR
13.	PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES	252.225-7009	I0B002	9C APR

SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF BIDDERS

52.225-12 K7A090 NOTICE OF RESTRICTIONS ON CONTRACTING WITH SANCTIONED PERSONS

(a) Statutory prohibitions have been imposed on contracting with sanctioned persons, as specified in Federal Acquisition Regulation (FAR) 52.225-13, Restrictions on Contracting with Sacntioned Persons.

(b) By submission of this offer, the Offeror represents that no products or services, except those listed in this paragraph (b), delivered to the Government under any contract resulting from this solicitation will be products or services of a sanctioned person, as defined in the clause referenced in paragraph (a) of this provision, unless one of the exceptions

in paragraph (d) of the clause at FAR 52.225-13 applies.

Product or Service	Sanctioned Person

(LIST AS NECESSARY)

52.219-1 K7A219 SMALL BUSINESS CONCERN REPRESENTATION

The offeror represents and certifies as part of its offer that [ ] it is, [ ] is not a small business concern and that [ ] all, [ ] not all end items to be furnished will be manufactured or produced by a small business concern in the United States, its territories or possessions, Puerto Rico, or the Trust Territory of the Pacific Islands. "Small Business Concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the filed of operation in which it is bidding on Government contracts, and qualified as a small business under the size standards in this solicitation.

SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO BIDDERS

52.252-1 L7A655 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

TOTAL NR OF PAGES PRINTED: 10

RFQ.TXT

(Generated by APADE jr.)

```
***DJDE***JDE=104,COPIES=0001,FORMS=SF18A,PMODE=PORTRAIT,ASSIGN=(1,5),ASSIGN=(2,16),ASSIGN=(3,33),ASSIGN=(4,85),;
***DJDE***FONTS=((P06BOB,8),(UN118B,8),(P07TCB,8)),END;
1                                   X                                                                  1
1
3     N31405-92-Q-0001    92 MAR 10        31405-0001                                  DO-C9E
1
1     STU PG MONTEREY
1     NAVAL POSTGRADUATE SCHOOL                                          92 APR 29
1     CODE 41
1     MONTEREY
1     CA, 93943-5026
1     BUYER: BUYER TWO                      PHONE: 408-697-5009          X
1
1     EASE DISTRIBUTION GROUP 61
1     NAVAL POSTGRADUATE SCHOOL
1     MONTEREY
1     CA, 93943-5000
1
1                                                                                  SEE SCHEDULE
1     92 MAR 15
1
1
1
1
1
1
1
1
1     CAGE  EAZ61       ESTABLISHMENT
***DJDE***FORMS=SF18B,PMODE=PORTRAIT,END;

***DJDE***ASSIGN=(1,6),ASSIGN=(2,12),FORMS=CONTA,;

***DJDE***FONTS=((UN311E,8),(P07TCB,8),(P07TCB,7),(P07TBC,7),(P08SCA,7),(UN205E,7),(ITA06E,7),(PR111B,7),(2143B
P,7)),END;
2                                         N31405-92-Q-0001                    3
1     SECTION B - SUPPLIES OR SERVICES AND PRICES
1
1     ITEM NO. SUPPLIES/SERVICES                          QUANTITY  UNIT   UNIT PRICE     AMOUNT
2
2     0001    NSN/LSN 9Q 6110-01-123-9999                 500    EA
2
2             NOMENCLATURE FOR N31405-0060-0001
2
3             ADDITIONAL INFORMATION FOR THIS REQUISITION
3             AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
3             BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
3             CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
3             DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
3             EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE
```

```
3           FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
2
2           INSPECT AT  DESTINATION       INSPECT BY  RECEIVER
2            ACCEPT AT  DESTINATION        ACCEPT BY  RECEIVER
2
2           DELY DATE  92 APR 29
2
2           SHIP TO    31405
2                      RECEIVING OFFICER
2                      STU PG MONTEREY
2                      NAVAL POSTGRADUATE SCHOOL
2                      CODE 41
2                      MONTEREY
2                      CA, 93943-5026
2
2           MARK FOR   N31405-0060-0001   NON MILSTRIP
2                      31405
2                      STU PG MONTEREY
2                      NAVAL POSTGRADUATE SCHOOL
2                      CODE 41
2                      MONTEREY
2                      CA, 93943-5026
2
2           TP 2  RDD 92 APR 29
2
2
2     0002  NSN/LSN 9Q 6110-00-234-9876                  25    BX
2
2           NOMENCLATURE FOR N31405-0060-0002
2
3           ADDITIONAL NOMENCLATURE FOR N31405-0060-0002
3           YOU CAN ENTER AS MUCH DATA HERE AS YOU DESIRE
3           AND IT WILL PRINT IF PRESENT.
3           ************************************************
3           WHEN YOU DO YOUR DATA ENTRY, MAKE SURE THAT YOU
3           ENTER THE APPROPRIATE PIIN IN ALL REQUISITIONS
3           THAT YOU WANT INCLUDED IN THE RFQ.....
3           ---
3           THE STOCK NUMBER OF THE ITEMS SHOULD ALL BE
3           IN THE SAME FSG.....
3           -
3           I HAVE ADDED FSG 59-64 TO THE UIC FILE AS
3           RAZ59 - RAZ64 SO FOR ANY DRILLS THAT YOU HAVE TO
3           PERFORM FOR DEMO PURPOSES USE ONE OF THOSE FSGs
3           TO HAVE EVERYTHING WORK PROPERLY.
2
2           PN/CN  PN/CN WILL PRINT IF ENTERED
2
2           INSPECT AT  DESTINATION       INSPECT BY  RECEIVER
2            ACCEPT AT  DESTINATION        ACCEPT BY  RECEIVER
2
2           DELY DATE  92 APR 29
2
2           SHIP TO    31405
```

RECEIVING OFFICER
STU PG MONTEREY
NAVAL POSTGRADUATE SCHOOL
CODE 41
MONTEREY
CA, 93943-5026

MARK FOR N31405-0060-0002 NON MILSTRIP
31405
STU PG MONTEREY
NAVAL POSTGRADUATE SCHOOL
CODE 41
MONTEREY
CA, 93943-5026

TP 2 RDD 92 APR 29

SECTION E - INSPECTION AND ACCEPTANCE

	CLAUSE TITLE	REFERENCE		DATE
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3.	GRATUITIES	52.203-3	I0A004	84 APR
4.	COVENANT AGAINST CONTINGENT FEES	52.203-5	I0A005	84 APR
5.	NEW MATERIAL	52.210-5	I0A018	84 APR
6.	NOTICE OF SMALL BUSINESS-SMALL PURCHASE SET-ASIDE	52.219-4	I0A069	88 AUG
7.	CONVICT LABOR	52.222-3	I0A080	84 APR
8.	BUY AMERICAN ACT -- SUPPLIES	52.225-3	I0A098	89 JAN
9.	PAYMENTS	52.232-1	I0A137	84 APR
10.	DISCOUNTS FOR PROMPT PAYMENT	52.232-8	I0A145	89 APR
11.	DISPUTES	52.233-1	I0A159	84 APR
12.	CONTRACTOR INSPECTION REQUIREMENTS	52.246-1	I0A216	84 APR
13.	PROMPT PAYMENT	52.232-25	I0A422	89 APR
14.	PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES	252.225-7009	I0B002	90 APR

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referenced in paragraph (a) of this provision, unless one of the exceptions in paragraph (d) of the clause at FAR 52.225-13 applies.

Product or Service	Sanctioned Person
_____	_____
_____	_____
_____	_____

(LIST AS NECESSARY)

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2
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2 TOTAL NR OF PAGES PRINTED: 5

APPENDIX F

DATA FLOWS FOR OUTPUT TO EASE

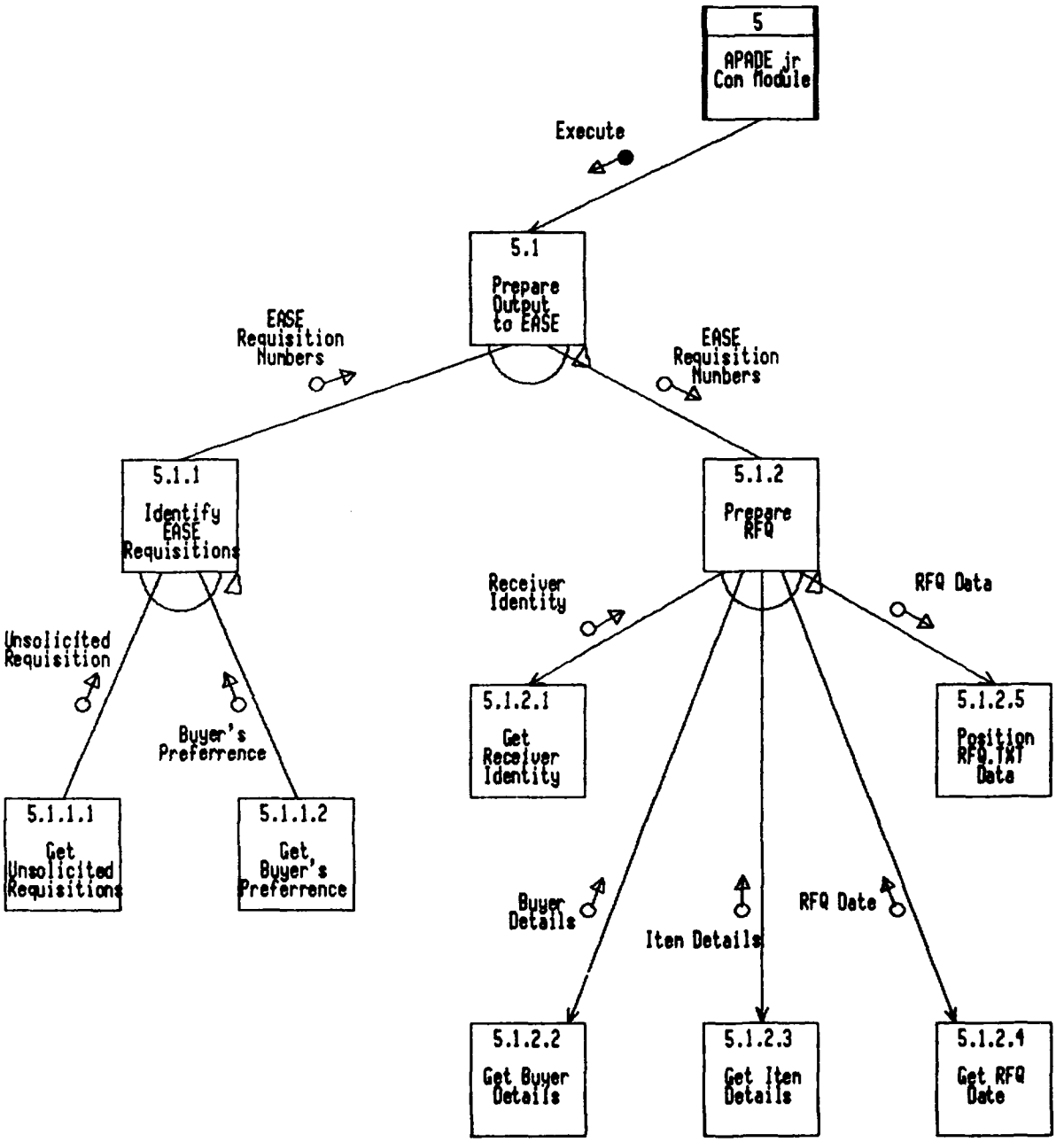
DATA FLOW	ATTRIBUTES	SOURCE
Buyer's Code	BUYER_CODE: 3 characters	RQNWORK.DBF file
Buyer's Identity	BUYER_CODE BUYERS_NAM: 25 characters PHONE_NR1: 10 numbers TYPE: 1 character	BUYER.DBF file
Buying Activity Identity	ADDR1: 30 characters ADDR2: 30 characters ADDR3: 30 characters CITY: 20 characters STATE: 2 characters B_UIC: 5 characters ZIP: 5 characters ZIP_EXT 4: characters CAGE: 5 characters	UIC.DBF file
CAGE Code	CAGE: 5 characters	Buyer entry
Date of RFQ preparation	DATE_PRINT: 8 date identifiers	System
Item Description	TEXT_DESCR: memo field from RQNWORK.DBF	RQNWORK.DBT file
EASE Distribution Group	EDG: 2 characters	RQNWORK.DBF
Final Receiving Activity UIC (Mark for)	UIC: 5 characters	Buyer entry
Item Number	ITEM_NR: 3 numbers	Generated by submodule

DATA FLOW	ATTRIBUTES	SOURCE
Nomenclature	NOMEN: 50 characters	First two digits of item Stock Number
Procurement Item Identification Number	PIIN: 16 characters	RQNWORK.DBF file
Purchase Request Number	PR_NR: 9 characters	RQNWORK.DBF file
Quantity	QUANTITY: 5 numbers	RQNWORK.DBF file
Receiving Activity UIC (Ship to)	R_UIC: 5 characters	Buyer entry
Receiving Activity Identity	ADDR1: 30 characters ADDR2: 30 characters ADDR3: 30 characters CITY: 20 characters STATE: 2 characters R_UIC: 5 characters ZIP: 5 characters ZIP_EXT 4: cwracters	UIC.DBF file
Required Delivery Date	RDD: 3 wmbers	RQNWORK.DBF file
Stock Number	STKNR: 13 characters	RQNWORK.DBF file
Unit Issue	UNITISSUE: 2 charac'ers	RQNWORK.DBF file

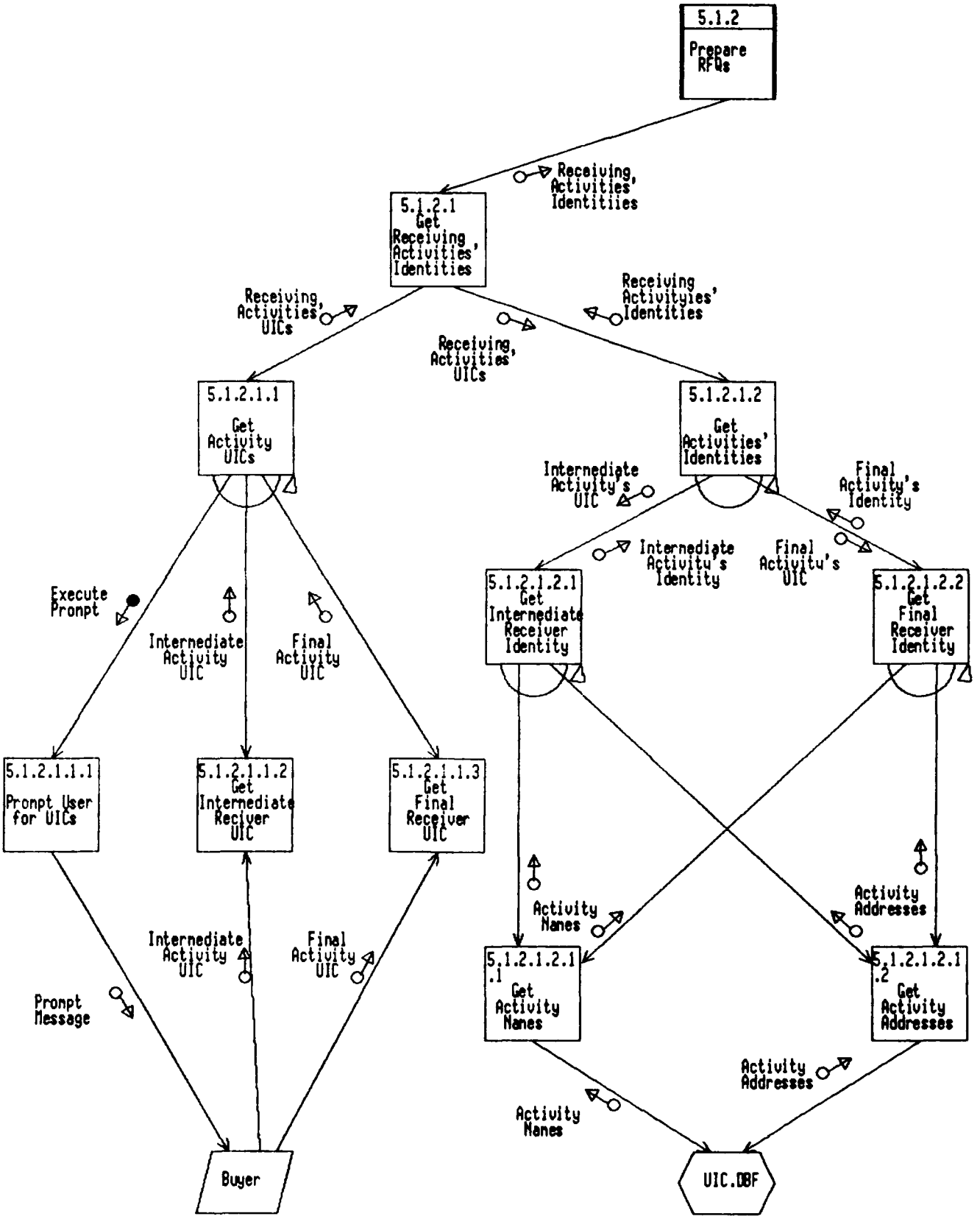
APPENDIX G

APADE JR. COMMUNICATION MODULE STRUCTURE CHARTS

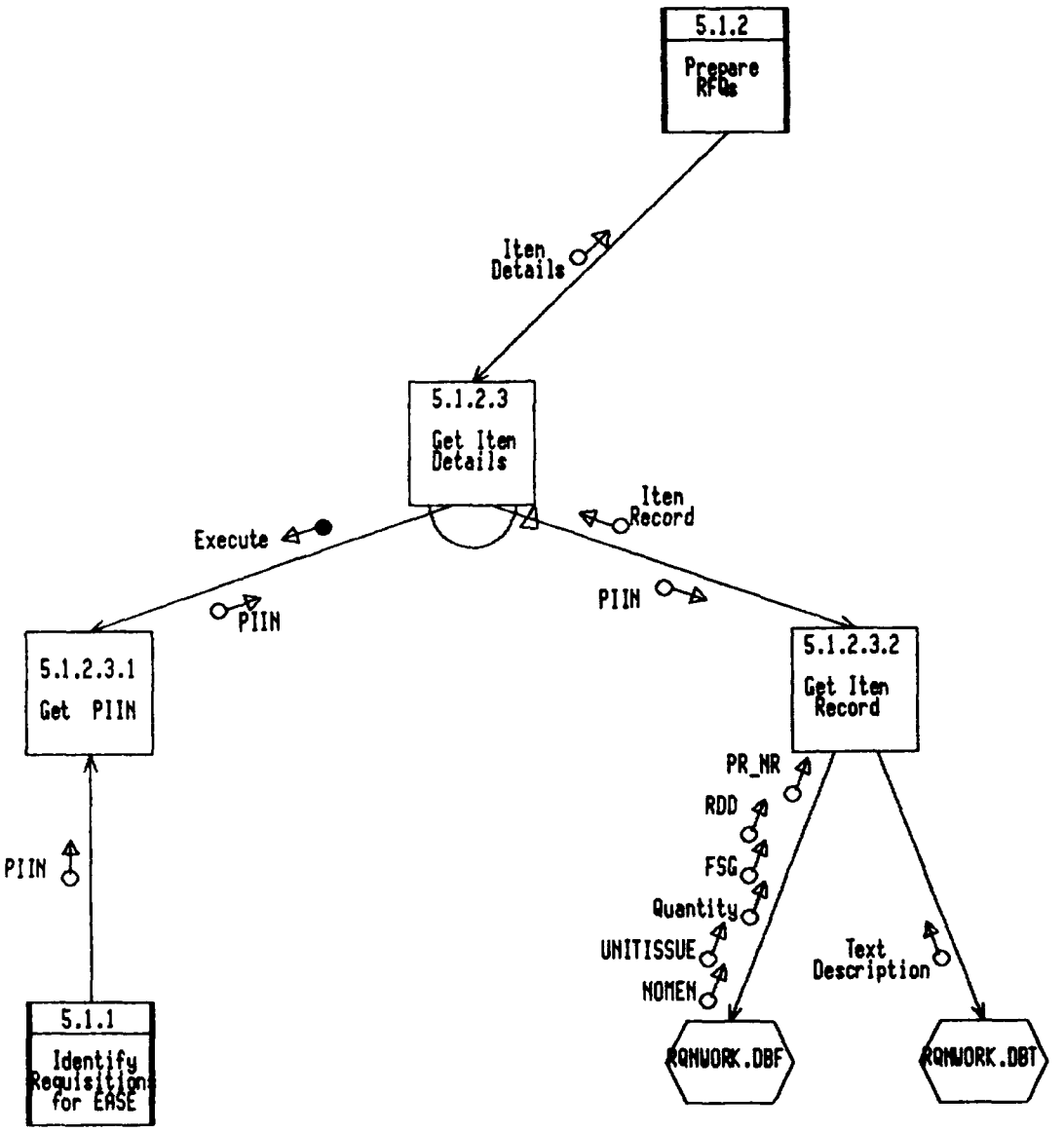
Process 5.1 Structure Chart
(Prepare Output to EASE)



Process 5.1.2.1 Structure Chart
(Get receiving Activity
Identity)



Process 5.1.2.3 Structure Chart
(Get Iten Details)



APPENDIX H

APADE JR. COMMUNICATION MODULE PROGRAM CODE

```
*:**************************************************************************
*:
*:        Program: STARTRFQ.PRG
*:
*:        System: APADE MICRO PROJECT
*:        Author: Steve Bowman
*:             Copyright (c) 1990, Steve Bowman
*:             Last modified: 10/02/92     10:19
*:
*:        Calls: RFQTXT.PRG
*:
*:**************************************************************************
** Set system defaults.
CLOSE DATABASES
SET PATH TO \DBASE\APADE
SET TALK OFF
SET BELL OFF
SET CONFIRM OFF
SET ESCAPE ON
SET STATUS OFF
SET SAFETY OFF
SET SCOREBOARD OFF
*==========================================================================
** Execute RFQTXT.PRG
DO RFQTXT
** Finish process and return to DOS.
CLOSE DATABASES
QUIT
** EOF: STARTRFQ.PRG ***
```

```
*****************************************************************************
* PROCEDURE RFQTXT
* Written by Nat Stevens, 3/92
* Calls:       PAGE1
*              PAGE2
*              CLAUSES
* Called by:   STARTRFQ
*****************************************************************************
* PURPOSE OF THIS PROCEDURE : TO CREATE AN ASCII TEXT FILE FROM DATA THAT
*         IS CONTAINED IN THE DATABASE THAT CAN BE UPLOADED TO THE EASE
*         SYSTEM THAT IS MAINTAINED BY NSC JAX.
*****************************************************************************
* SET ENVIRONMENT
SET TALK OFF
SET BELL OFF
SET CONFIRM ON
SET DELETED ON
SET ESCAPE OFF
SET EXACT OFF
SET INTENSITY ON
SET MEMOWIDTH TO 55
SET SAFETY OFF
SET STATUS OFF
SET SCOREBOARD OFF
*
* DISABLE FUNCTION KEYS
*
SET FUNCTION 2  TO ''
SET FUNCTION 3  TO ''
SET FUNCTION 4  TO ''
SET FUNCTION 5  TO ''
SET FUNCTION 6  TO ''
SET FUNCTION 7  TO ''
SET FUNCTION 8  TO ''
SET FUNCTION 9  TO ''
SET FUNCTION 10 TO ''
*
INSPECT1 = "2              INSPECT AT  DESTINATION       INSPECT BY  RECEIVER"
INSPECT2 = "2               ACCEPT AT  DESTINATION        ACCEPT BY  RECEIVER"
* PAGE 1
P                          1                          H                          1    =    "
***DJDE***JDE=104,COPIES=0001,FORMS=SF18A,PMODE=PORTRAIT,ASSIGN=(1,5),ASSIGN=(2,16),ASSIGN=(3,33)
,ASSIGN=(4,85),;"
P1H2 = " ***DJDE***FONTS=((P06BOB,8),(UN118B,8),(P07TCB,8)),END;"
P1H3 = "1                                  X
       1"
P1F1 = " ***DJDE***FORMS=SF18B,PMODE=PORTRAIT,END;"
* PAGE 2+
P2H1 = " ***DJDE***ASSIGN=(1,6),ASSIGN=(2,12),FORMS=CONTA,;"
P                          2                          H                          2    =    "
***DJDE***FONTS=((UN311E,8),(P07TCB,8),(P07TCB,7),(P07TBC,7),(P08SCA,7),(UN205E,7),(ITA06E,7),(PR
111B,7),(2143BP,7)),END;"
P2H3 = "1      SECTION B - SUPPLIES OR SERVICES AND PRICES"
P2H4 = "1      ITEM NO. SUPPLIES/SERVICES                          QUANTITY  UNIT   UNIT PRICE
```

```
    AMOUNT"

BLANKLINE = ' '
BLANK1 = "1"
BLANK2 = "2"
ONEP5 = "1     "
ONEP6 = "1      "
ONEP7 = "1       "
ONEP90 = "1" + SPACE(90)
TWOP6 = "2      "
TWOP14 = "2             "
TWOP25 = "2                        "
TWOP46 = "2                                              "
THREEP6 = "3      "
THREEP14 = "3             "

PUBLIC X
* GET A STARTING POINT FOR DATE CALCULATIONS
LASTYEAR = YEAR(DATE()) - 1
X = STR(LASTYEAR,4)
EOLASTYR = CTOD("12/31/&X")
*
*REINDEX TO MAKE SURE EVERYTHING IS THERE WHERE WE NEED IT
CLEAR
@ 12,15 SAY 'REINDEXING DATABASE....'
*
* OPEN THE DATABASE
SELECT A
USE C:\DBASE\APADE\RQNWORK INDEX C:\DBASE\APADE\REQPIINR
REINDEX
*
SELECT B
USE C:\DBASE\APADE\BUYER INDEX C:\DBASE\APADE\BUYERBC
REINDEX
*
SELECT C
USE C:\DBASE\APADE\UIC INDEX C:\DBASE\APADE\UICUIC
REINDEX
*

* GET THE PIIN TO PRINT
HAPPY = .F.
DO WHILE .NOT. HAPPY
   CLEAR GETS
   CLEAR
   @ 3,5 SAY 'PRESS ESCAPE TO RETURN TO PREVIOUS MENU'
   STORE SPACE(LEN(RQNWORK->PIIN)) TO MPIIN
   @ 5,5 SAY 'ENTER PIIN TO SEND TO EAZE:' GET MPIIN;
             PICTURE '@! A99999-99-A-NNNN'
   READ
   IF LEN(TRIM(MPIIN)) = 0
      RETURN
   ENDIF (NOTHING ENTERED)
   @ 7,5 SAY 'IS THIS CORRECT ?:' GET HAPPY PICTURE 'Y'
```

```
   READ
   @ 7,0 CLEAR TO 7,79
   SELECT RQNWORK
   SEEK MPIIN
   IF .NOT. EOF()
      ?? CHR(7)
   ELSE
      STORE .F. TO HAPPY
      @ 9,5 SAY 'PIIN NOT FOUND IN RQNWORK.DBF'
      @ 10,5 SAY 'PRESS ANY KEY TO RETRY.......'
      WAIT ''
      LOOP
   ENDIF (FOUND IN RQNWORK)
ENDDO (NOT HAPPY)
PUBLIC MPAGENO
MPAGENO = 3
* INITIALIZE ITEM NUMBER
PUBLIC MITEM
MITEM = '0001'
*
CLEAR
@ 12,15 SAY 'CREATING RFQ.TXT.....PLEASE LET ME DO MY THING'
*
SET CONSOLE OFF
SET ALTERNATE TO RFQ.TXT
SET ALTERNATE ON
DO PAGE1
DO PAGE2
DO CLAUSES
CLOSE ALTERNATE
SET ALTERNATE OFF
* TYPE RFQ.TXT TO PRINT
* EJECT
RETURN
** End of RFQTXT.PRG **
```

```
*********************************************************************************
*PROCEDURE PAGE1
*Written by Nat Stevens, 3/92
*Called by:     RFQTXT
*********************************************************************************
* PURPOSE OF THIS PROCEDURE : TO PRINT THE FIRST PAGE OF RFQ.TXT
* ASSUMES -
* MPIIN IS SET TO THE RFQ NUMBER TO BE PRINTED.
* MPIIN WAS FOUND IN ALL REQUISITIONS TO BE INCLUDED
* THE FSG (FIRST 2 CHARACTERS OF STOCK NR HAS AN APPROPRIATE ENTRY IN UIC.DBF
* THE BUYER CODE IS IN THE RQNWORK.DBF FOR AT LEAST THE FIRST REQUISITION NUMBER.
* THE UIC USED IN THE PIIN HAS AN ENTRY IN UIC.DBF
*
* THE PROGRAM IS POINTING AT THE FIRST REQUISITION TO BE PRINTED
*
* ASSUMES QUITE A BIT BUT IT WOULD TAKE TOO MUCH EFFORT TO FIX THE WHOLE
* PROGRAM TO THE POINT WHERE ASSUMPTIONS ARE NOT NECESSARY.
*********************************************************************************
? P1H1
? P1H2
? P1H3
? BLANK1
? THREEP6 + MPIIN + SPACE(4) + YYMONDD(DATE()) + SPACE(8) + RQNWORK->PR_NR1;
        + '-' + RQNWORK->PR_NR2 + SPACE(31) + 'DO-C9E'
? BLANK1
*
* GET THE LOOKUP ITEMS READY TO GO
STORE RQNWORK->BUYER_CODE TO BUYFINDER
STORE SUBSTR(RQNWORK->PIIN,2,5) TO UICFINDER
STORE 'EAZ' + SUBSTR(RQNWORK->STKNR,1,2) TO EAZFINDER
* THIS IS FSG !
*
SELECT UIC
SEEK UICFINDER
IF .NOT. EOF()
   ? ONEP6 + UIC->ADDR1
   IF LEN(TRIM(UIC->ADDR2)) > 0
      ? ONEP6 + UIC->ADDR2 + SPACE(38) + JULTOCAL(RQNWORK->RDD)
   ENDIF (THERE IS SOMETHING IN LINE 2 OF ADDRESS)
   IF LEN(TRIM(UIC->ADDR3)) > 0
      ? ONEP6 + UIC->ADDR3
   ENDIF (THERE IS SOMETHING IN LINE 3 OF ADDRESS)
   IF LEN(TRIM(UIC->ADDR4)) > 0
      ? ONEP6 + UIC->ADDR4
   ENDIF (THERE IS SOMETHING IN LINE 4 OF ADDRESS)
   ? ONEP6 + UIC->STATE + ', ' + UIC->ZIP + '-' + UIC->ZIP_EXT
ELSE
   ? ONEP6 + 'ISSUING ACTIVITY ADDRESS NOT IN UIC FILE'
ENDIF (FOUND IN UIC FILE)
*
* GET BUYER DATA
*
* [NOTE] I HARD CODED THE AREA CODE BECASUE THEY DIDNT LEAVE ROOM IN THE FILE
*        FOR IT.
```

```
*
SELECT BUYER
SEEK BUYFINDER
IF .NOT. EOF()
   ? ONEP6 + 'BUYER: ' + BUYER->BUYERS_NAM + SPACE(8) + 'PHONE: 408-' +;
     BUYER->PHONE_NR1 + '-' + BUYER->PHONE_NR2 + SPACE(10) + 'X'
ELSE
   ? ONEP6 + 'BUYER NOT FOUND IN BUYER FILE'
ENDIF (BUYER CODE FOUND IN BUYER.DBF)
? BLANK1
*
* EASE DISTRIBUTION GROUP
*
SELECT UIC
SEEK EAZFINDER
IF .NOT. EOF()
   ? ONEP6 + UIC->ADDR1
   IF LEN(TRIM(UIC->ADDR2)) > 0
      ? ONEP6 + UIC->ADDR2
   ENDIF (THERE IS SOMETHING IN LINE 2 OF ADDRESS)
   IF LEN(TRIM(UIC->ADDR3)) > 0
      ? ONEP6 + UIC->ADDR3
   ENDIF (THERE IS SOMETHING IN LINE 3 OF ADDRESS)
   IF LEN(TRIM(UIC->ADDR4)) > 0
      ? ONEP6 + UIC->ADDR4
   ENDIF (THERE IS SOMETHING IN LINE 4 OF ADDRESS)
   ? ONEP6 + UIC->STATE + ', ' + UIC->ZIP + '-' + UIC->ZIP_EXT
ELSE
   ? ONEP6 + 'DISTRIBUTION GROUP ADDRESS NOT IN UIC FILE'
ENDIF (FOUND IN UIC FILE)
*
? BLANK1
? '1' + SPACE(88) + 'SEE SCHEDULE'
? ONEP6 + YYMONDD(DATE() + 5)
? BLANK1
? BLANK1
? BLANK1
? BLANK1
? BLANK1
? BLANK1
? BLANK1
? '1     CAGE  ' + EAZFINDER + SPACE(7) + 'ESTABLISHMENT'
? P1F1
? ' '
*
RETURN
*** END OF PROCEDURE PAGE1**********************
```

```
*********************************************************************************
*PROCEDURE PAGE2
*Written by Nat Stevens, 3/92
*Called by:    RFQTXT
*********************************************************************************
* PURPOSE OF THIS PROCEDURE : TO PRINT THE CONTINUATION PAGES OF RFQ.TXT
* ASSUMES -
* MPIIN IS SET TO THE RFQ NUMBER TO BE PRINTED.
* MPIIN WAS FOUND IN ALL REQUISITIONS TO BE INCLUDED
* THE FSG (FIRST 2 CHARACTERS OF STOCK NR HAS AN APPROPRIATE ENTRY IN UIC.DBF
* THE BUYER CODE IS IN THE RQNWORK.DBF FOR AT LEAST THE FIRST REQUISITION NUMBER.
* THE UIC USED IN THE PIIN HAS AN ENTRY IN UIC.DBF
*
* THE PROGRAM IS POINTING AT THE FIRST REQUISITION TO BE PRINTED COMING IN
*     TO THIS MODULE
*********************************************************************************
? P2H1
? P2H2
? '2' + SPACE(46) + MPIIN + SPACE(14) + STR(MPAGENO)
MPAGENO = MPAGENO + 1
? P2H3
? BLANK1
? P2H4
DO WHILE .NOT. EOF() .AND. RQNWORK->PIIN = MPIIN
   ? BLANK2
   ? TWOP6 + MITEM + SPACE(4) + 'NSN/LSN ' + RQNWORK->DIST_COG + ' ' +;
     SUBSTR(RQNWORK->STKNR,1,4) + '-' + SUBSTR(RQNWORK->STKNR,5,2) + '-';
     + SUBSTR(RQNWORK->STKNR,7,3) + '-' + SUBSTR(RQNWORK->STKNR,10,4) +;
     SPACE(12) + STR(RQNWORK->QUANTIY,10) + SPACE(4) + RQNWORK->UNITISSUE
   * INCREMENT ITEM NR
   MITEM = INCITEM(MITEM)
   ? BLANK2
   ? TWOP14 + RQNWORK->NOMEN
   ? BLANK2
   * CHECK THE MEMO FIELD FOR DATA
   NROFLINES = MEMLINES(RQNWORK->TEXT_DESCR)
   LINE_CTR = 1
   DO WHILE LINE_CTR <= NROFLINES
      IF LEN(TRIM(MLINE(RQNWORK->TEXT_DESCR,LINE_CTR))) > 0
        ? THREEP14 + MLINE(RQNWORK->TEXT_DESCR,LINE_CTR)
      ENDIF (THERE IS SOMETHING IN THE MEMO FIELD)
      LINE_CTR = LINE_CTR + 1
   ENDDO (DATA IN MEMO FIELD)
   ? BLANK2
   IF LEN(TRIM(RQNWORK->PNCN)) > 0
      ? TWOP14 + 'PN/CN   ' + RQNWORK->PNCN
      ? BLANK2
   ENDIF (SOMETHING IN PNCN)
   ? INSPECT1
   ? INSPECT2
   ? BLANK2
   ? TWOP14 + 'DELY DATE   ' + JULTOCAL(RQNWORK->RDD)
   ? BLANK2
   *
```

```
IF LEN(TRIM(RQNWORK->SHIPTO)) > 0
   STORE RQNWORK->SHIPTO TO UICFINDER
ELSE
   STORE SUBSTR(RQNWORK->RN,2,5) TO UICFINDER
ENDIF
*
SELECT UIC
SEEK UICFINDER
FOUNDIT = .F.
IF .NOT. EOF()
   * FOUND IT !
   FOUNDIT = .T.
   ? TWOP14 + 'SHIP TO     ' + UICFINDER
   ? TWOP25 + 'RECEIVING OFFICER'
   ? TWOP25 + UIC->ADDR1
   IF LEN(TRIM(UIC->ADDR2)) > 0
      ? TWOP25 + UIC->ADDR2
   ENDIF (THERE IS SOMETHING IN LINE 2 OF ADDRESS)
   IF LEN(TRIM(UIC->ADDR3)) > 0
      ? TWOP25 + UIC->ADDR3
   ENDIF (THERE IS SOMETHING IN LINE 3 OF ADDRESS)
   IF LEN(TRIM(UIC->ADDR4)) > 0
      ? TWOP25 + UIC->ADDR4
   ENDIF (THERE IS SOMETHING IN LINE 4 OF ADDRESS)
   ? TWOP25 + UIC->STATE + ', ' + UIC->ZIP + '-' + UIC->ZIP_EXT
ELSE
   ? TWOP14 + 'SHIP TO     ISSUING ACTIVITY'
ENDIF (SHIP TO FOUND IN UIC.DBF)
? BLANK2
* NOW DO THE MARK FOR - USE SAME ADDRESS IF FOUNDIT
? TWOP14 + 'MARK FOR    ' + SUBSTR(RQNWORK->RN,1,6) + '-' +;
  SUBSTR(RQNWORK->RN,7,4) + '-' + SUBSTR(RQNWORK->RN,11,5) +;
  '   NON MILSTRIP'
? TWOP25 + UICFINDER
IF FOUNDIT
   ? TWOP25 + UIC->ADDR1
   IF LEN(TRIM(UIC->ADDR2)) > 0
      ? TWOP25 + UIC->ADDR2
   ENDIF (THERE IS SOMETHING IN LINE 2 OF ADDRESS)
   IF LEN(TRIM(UIC->ADDR3)) > 0
      ? TWOP25 + UIC->ADDR3
   ENDIF (THERE IS SOMETHING IN LINE 3 OF ADDRESS)
   IF LEN(TRIM(UIC->ADDR4)) > 0
      ? TWOP25 + UIC->ADDR4
   ENDIF (THERE IS SOMETHING IN LINE 4 OF ADDRESS)
   ? TWOP25 + UIC->STATE + ', ' + UIC->ZIP + '-' + UIC->ZIP_EXT
ENDIF (THE UIC WAS FOUND)
? BLANK2
*
* BACK TO WHERE I NEED TO BE
*
SELE RQNWORK
? TWOP14 + 'TP 2  RDD ' + JULTOCAL(RQNWORK->RDD)
? BLANK2
```

```
   SKIP
ENDDO (NOT EOF/SAME PIIN)
*
RETURN
*** END OF PROCEDURE PAGE2**********************
```

```
*****************************************************************************
* PROCEDURE CLAUSES
* Written by Nat Stevens, 3/92
* Called by:   RFQTXT
*****************************************************************************
* PURPOSE OF THIS PROCEDURE : HAS A BUNCH OF CLAUSES HARD CODED IN TO ADD TO
*         THE TAIL END OF RFQ.TXT [THESE CLAUSES ARE NOT NECESSARILY CORRECT
*         AND WILL ALL PRINT EVERY TIME.]
*****************************************************************************

? "2                                                " + MPIIN +"              "+ STR(MPAGENO)
MPAGENO = MPAGENO + 1
? "2         SECTION E - INSPECTION AND ACCEPTANCE"
? "2                CLAUSE TITLE                                    REFERENCE             DATE"
? "2         1.  RESPONSIBILITY FOR SUPPLIES                        52.246-16     E0A015  84 APR"
? "2"
? "2"
? "2         SECTION F - DELIVERIES OR PERFORMANCE"
? "2         52.212-10     F7A002  DELIVERY OF EXCESS QUANTITIES"
? "2           The Contractor is responsible for the delivery of each item quantity"
? "2         within allowable variations, if any.  If the Contractor delivers and"
? "2         the Government receives quantities of any item in excess of the"
? "2         quantity called for (after considering any allowable variation in"
? "2         quantity), such excess quantities will be treated as being delivered"
? "2         for the convenience of the Contractor.  The Government may retain such"
? "2         excess quantities up to $250 in value without compensating the"
? "2         Contractor therefor, and the Contractor waives all right, title, or"
? "2         interests therein.  Quantities in excess of $250 will, at the option"
? "2         of the Government, either be returned at the Contractor's expense or"
? "2         retained and paid for by the Government at the contract unit price."
? "2"
? "2"
? "2         SECTION I - CONTRACT CLAUSES"
? "2                CLAUSE TITLE                                    REFERENCE             DATE"
? "2         1.  ANTI-KICKBACK PROCEDURES                           52.203-7      I0A002  88 OCT"
? "2         2.  OFFICIALS NOT TO BENEFIT                           52.203-1      I0A003  84 APR"
? "2         3.  GRATUITIES                                         52.203-3      I0A004  84 APR"
? "2         4.  COVENANT AGAINST CONTINGENT FEES                   52.203-5      I0A005  84 APR"
? "2         5.  NEW MATERIAL                                       52.210-5      I0A018  84 APR"
? "2         6.  NOTICE OF SMALL BUSINESS-SMALL PURCHASE SET-ASIDE  52.219-4      I0A069  88 AUG"
? "2         7.  CONVICT LABOR                                      52.222-3      I0A080  84 APR"
? "2         8.  BUY AMERICAN ACT -- SUPPLIES                       52.225-3      I0A098  89 JAN"
? "2         9.  PAYMENTS                                           52.232-1      I0A137  84 APR"
? "2        10.  DISCOUNTS FOR PROMPT PAYMENT                       52.232-8      I0A145  89 APR"
? "2        11.  DISPUTES                                           52.233-1      I0A159  84 APR"
? "2        12.  CONTRACTOR INSPECTION REQUIREMENTS                 52.246-1      I0A216  84 APR"
? "2        13.  PROMPT PAYMENT                                     52.232-25     I0A422  89 APR"
? "2        14.  PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES        252.225-7009  I0B002  90 APR"
? "2"
? "2"
? "2         SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF BIDDERS"
? "2         52.225-12     K7A090  NOTICE OF RESTRICTIONS ON CONTRACTING WITH"
? "2                               SANCTIONED PERSONS"
? "2           (a) Statutory prohibitions have been imposed on contracting with"
```

```
? "2          sanctioned persons, as specified in Federal Acquisition Regulation (FAR)"
? "2          52.225-13, Restrictions on Contracting with Sacntioned Persons."
? "2"
? "2            (b) By submission of this offer, the Offeror represents that no products"
? "2          or services, except those listed in this paragraph (b), delivered to the"
? "2          Government under any contract resulting from this solicitation will be"
? "2          products or services of a sanctioned person, as defined in the clause"
? "2                                        " + MPIIN +"              "+ STR(MPAGENO)
? "2          referenced in paragraph (a) of this provision, unless one of the exceptions"
? "2          in paragraph (d) of the clause at FAR 52.225-13 applies."
? "2"
? "2          Product or Service          Sanctioned Person"
? "2"
? "2          _________________           _____________________"
? "2          _________________           _____________________"
? "2          _________________           _____________________"
? "2                        (LIST AS NECESSARY)"
? "2          52.219-1      K7A219  SMALL BUSINESS CONCERN REPRESENTATION"
? "2          The offeror represents and certifies as part of its offer that [  ] it is,"
? "2          [  ] is not a small business concern and that [  ] all, [  ] not all end"
? "2          items to be furnished will be manufactured or produced by a small business"
? "2          concern in the United States, its territories or possessions, Puerto Rico,"
? '2          or the Trust Territory of the Pacific Islands. "Small Business Concern,"'
? "2          as used in this provision, means a concern, including its affiliates, that"
? "2          is independently owned and operated, not dominant in the filed of operation"
? "2          in which it is bidding on Government contracts, and qualified as a small"
? "2          business under the size standards in this solicitation."
? "2"
? "2"
? "2          SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO BIDDERS"
? "2          52.252-1      L7A655  SOLICITATION PROVISIONS INCORPORATED BY REFERENCE"
? "2            This solicitation incorporates one or more solicitation provisions by"
? "2          reference, with the same force and effect as if they were given in full"
? "2          text.  Upon request, the Contracting Officer will make their full text"
? "2          available."
? "2"
? "2"
? "2"
```

```
? "2"
? "2"
? "2"
? "2"
? "2"
? "2"
? "2"
? "2"
? "2"
? "2"
? "2      TOTAL NR OF PAGES PRINTED:" + STR(MPAGENO,4)
*
RETURN
*** END OF PROCEDURE CLAUSES**********************
```

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