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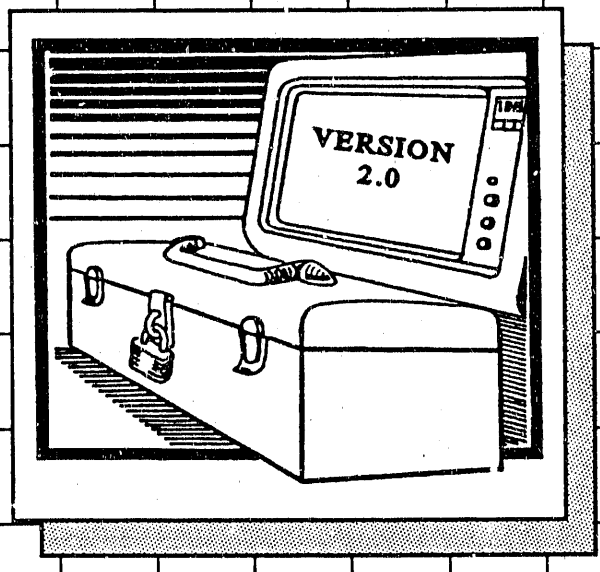
TOOLKIT



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DATA PROCESSING SERVICES

LAWRENCE BERKELEY LABORATORY
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Preface

Five years ago the Data Processing Services department was faced with the problem of converting all of our business data processing applications because the scientific computer we were using was being replaced. At that time we adopted a new strategy for supplying users with both standard reports and special information from our central administrative data files. The goal was to provide as much information to user groups as possible in a form that could be easily accessed, yet maintain the security and integrity of sensitive information contained in the central IBM based files.

With this objective in mind we set about on the development of TOOLKIT, based on a fourth-generation language which could be used in all three of our operating environments. These include the central IBM computers, the scientific VAX cluster, and the growing number of IBM personal computers attached to the central network. The results of this effort have been highly successful and information which formerly was hidden from user departments now is easily available, even to people who have no computer training.

The effort dedicated to this project was extremely modest, generally limited to less than one full time person, but the accomplishments have been large. This effort was directed primarily to development, and less was done to inform and train people in how to use the system.

Through use of the FOCUS data base language, users can access data files using the terminal and operating system most familiar to them. Through the use of menus, powerful report generation capabilities are available and custom reports can be prepared in minutes without having to know anything about programming. It is our hope that through the use of the TOOLKIT platform, user groups will be able to simplify and standardize the ways in which they administer their business affairs.

The purpose of this manual is to introduce you to TOOLKIT II and help you in getting started, if you are a new user, and to acquaint you with enhanced capabilities if you are a current user. We hope that you will find TOOLKIT II both worthwhile and enjoyable.

Bill Bagot, Department Head
Data Processing Services

May 3, 1990

Table of Contents

Introduction

The Toolkit is a menu-driven software application that provides LBL staff with access to, and reports from the laboratory's central administrative data. The original data (including ledger, purchasing, stores, travel, etc.) are stored in a variety of mainframes and PCs. To make this information readily available, it is moved to the VAX cluster where it is stored as Focus files.

Focus is a high-level relational database management package created by Information Builders Inc. It is a complete "Information Control System" with comprehensive features for entering, maintaining, retrieving, and analyzing data. Furthermore, it contains a powerful report generation facility that allows for the rapid creation of sophisticated and complex reports as well as simple tabular output.

Currently, most of the Laboratory's administrative data are stored as Focus files. Those Laboratory administrators well versed in Focus can easily take advantage of its many capabilities. For those interested in files they do not use regularly or who do not know just how the data are stored, Focus is much more difficult to use. To overcome some of these problems, the Toolkit was written to provide a user-friendly front-end to Focus. Although the Toolkit is geared mainly for the person with little data processing training and with *no* knowledge of Focus, it also provides the framework in which the more knowledgeable Focus user can work.

The Toolkit was started in the mid 1980's. As people started to use it and saw how easy it was to get customized reports, they wanted more and more features. Bert expanded the Toolkit to satisfy some of their desires. By 1989, a decision was made to rewrite the Toolkit, i.e., to build Toolkit II. This rewrite used some of the newer, more user-friendly features available in Focus, standardized the menus and reports available, and made the entire system easier to use by including on-line documentation.

The purpose of this User's Guide is to show by example many of the features of Toolkit II. Some examples will be copies of screens as they appear while running the Toolkit. Other examples will show what the user should enter in various situations; in these instances, what the computer asserts will be in boldface and what the user responds will be in regular type.

The User's Guide is divided into four sections. The first section, 'FOCUS Databases', will give a broad overview of the Focus administrative databases that are available on the VAX; easy-to-use reports are available for most of them in the Toolkit. The second section, 'Getting Started', will cover the steps necessary to log onto the Computer Center VAX cluster and how to start Focus and the Toolkit. The third section, 'Using the Toolkit', will discuss some of the features in the Toolkit - the available reports and how to access them, as well as some utilities. The fourth section, 'Helpful Hints', will cover some useful facts about the VAX and Focus as well as some of the more common problems that can occur.

The Toolkit is not set in concrete but is continually being revised and improved. If you have any opinions as to changes that you would like to see made to the Toolkit or new features that you would like included, please let us know. Since we do try to respond to the needs of the user and make periodic improvements to the Toolkit, this User's Guide may not correspond exactly to what is available in the computer. In general, changes are made to provide new options or features; rarely is an existing feature deleted.

I. FOCUS Databases

The main Focus labwide administrative data files are summarized in the following table.

LBL FOCUS Administrative Databases

Description	File Name	Freq. of Update
1) Account numbers - current and valid	GLMASTER	Daily
2) Efforts Files -		
Detail weekly effort	FALLWEFF	Weekly
Detail monthly effort	FALLMEFF	Monthly
Summary monthly effort	FYTDWEFF	Monthly
3) Job orders	FORMATA	Weekly
4) Ledger Files -		
Detail ledger	FDETLDGR	Monthly
General ledger	FGENLDGR	Monthly
5) Personnel Files -		
Employees and guests by name, address,etc.	EVERYONE	Weekly
Data on current & recent employees	FPEOPLE	Weekly
Data on current & recent guests	FGUEST	Monthly
6) Property Management -		
Assets	ASSET	Weekly
Manufacture Names	MFRNAME	Weekly
Property Record Unit Catalog	PRUC	Weekly
7) Purchase orders - outstanding	PARS	Weekly
8) Sponsored Research Database	SPONSOR	Daily
9) Stores Files -		
Weekly stores issues and returns	FALLMISA	Weekly
Stores inventory	FSWEET	Weekly
10) Travel reports - open & recently closed	FTRAVEL	Weekly
11) Warehouse and Storage	FWAREHSE	Monthly

The first column contains a very broad description of the contents of each file; the second column contains the name of the file on the VAX Cluster; and the third column shows how often the file is updated.

None of these files originate on the VAX - most come from the IBM Mainframe, although some are on IBM-PCs and one comes from Campus. Most of the files originating on the IBM are sent to the VAX automatically via an electronic gateway. Using the Gateway insures frequent, reliable, and timely updates of the VAX files from the IBM Mainframe. In summary, the process is as follows:

1) An IBM File is updated via routine job sequence.
2) At end of sequence, updated IBM file is sent to the Gateway.
3) File arrives on the VAX as a disk file.
4) File is recognized on the VAX by RJEPROD, a program that runs every half hour looking for recent arrivals from the gateway.
5) RJEPROD submits the proper update procedure and the corresponding VAX file is now updated.

The following eleven sections will discuss each of these administrative files in turn - a summary of what is in each database, where the source is, and whether or not general reports can easily be generated using the Toolkit.

I.A. Account Master File

GLMASTER, the account master file, contains current valid accounts along with a verbal description, the status, the program code, the division, etc. This file contains the most current data on which accounts belong to which division. It can thus be joined with other Focus files which only contain account numbers to sort information according to division, or to gather data for a single division. This file is recreated daily based on the sequential files amf.prm and amf.sub as received from the IBM via the gateway.

Within the Toolkit, one can check whether a particular cost account is valid, and can get a list of all active cost accounts by division.

I.B. Effort Files

In each fiscal year, there are three files containing effort data - one with detailed weekly data, one with detailed monthly data, and one with summary monthly data. Each file contains data (in hours) from October 1st through the most recent update.

FALLWEFF contains detail weekly effort for those employees who must report effort weekly, i.e., hours by 6-digit account and 6-digit job order number, by employee number, and by week number. This file is updated each Monday or Tuesday for the preceeding week ending on Saturday, based on the sequential file WEF.DAT that comes from the IBM via the Gateway.

FALLMEFF contains detail monthly effort for all employees, by employee number and pay account, by cost account and job order number, and by month. A given month's effort charges should correspond to the effort reported to the ledger. For each account charged, this file also contains data on shift, site location, job classification, pay code, overtime, etc. This file is updated within five working days of the end of the month based on the sequential file MEF.DAT that comes from the IBM via the Gateway. Although the format of the sequential file, MEF.DAT, is the same as that of the weekly effort file, WEF.DAT, the extra data on shift, site location, etc. are available only in FALLMEFF, not in FALLWEFF.

FYTDMEFF contains summary monthly effort by employee number and pay account, by cost

account, and by month. This file is updated within five working days of the end of the month, based on the sequential file YTD.DAT that comes from the IBM via the Gateway.

Reports on weekly effort by cost account, by employee number, and by payroll account can be generated through the Toolkit using the database FALLWEFF. Reports on monthly effort by cost account, by employee number, by payroll acount, or by job order number can be generated through the Toolkit using FYTDMEFF.

Summary data files for fiscal years 1986-1989 are kept in files FYTDEF86, FYTDEF87, FYTDEF88, FYTDEF89. These files are similar in contents and format to FYTDMEFF.

I.C. Job Order Files

The job order file, FORMATA, contains job order information for all open job orders and for those closed within the current fiscal year. For each job, this file contains cost estimates for both materials and labor, as well as actual costs. For actual costs, the file contains details on individual items as well as summaries by type of expense - total labor cost and total nonlabor cost, and over time - costs incurred in the current month, in the prior month, in the current fiscal year up to the prior month, and in prior fiscal years. FORMATA is very similar in content to FORMATA on the IBM. Many reports can be generated on this file from the Toolkit. FORMATA on the VAX is recreated each week on Monday or Tuesday after the weekly effort database has been updated.

I.D. Ledger Files

The general and detail ledger files, FGENLDGR and FDETLDGR respectively, contain data for the current fiscal year up to the latest update. Both are updated monthly on about the sixth working day of the month.

FDETLDGR contains each month's ledger details. Each record corresponds to one ledger transaction, e.g., a purchase order, travel, effort. These transactions come from 35 different sources. The detail ledger or DET report uses the data for one month.

FGENLDGR is a summary file of the detail ledger. Costs are summarized by account and expense type. The expense statement or EXP report is derived from the data in this database.

The Toolkit provides the capability of generating both the DET and EXP report for the current or prior fiscal years. Data for past fiscal years 1986-1989 are kept in files FDTLDG86, FDTLDG87, FDTLDG88, and FDTLDG89 for the detail ledger, and in FGNLDG86, FGNLDG87, FGNLDG88, and FGNLDG89 for the general ledger.

I.E. Personnel Files

There are several databases containing personnel and employee data. EVERYONE contains non-sensitive data and can be accessed by anyone. Both FPEOPLE and FGUEST contain sensitive data and are thus password protected.

EVERYONE contains non-sensitive data on every current employee and guest at the laboratory, i.e., their name, LBL-address and extension, division, and pay account. This file is generated from the two files - FPEOPLE and FGUEST. Data on employees are updated each Friday after FPEOPLE is updated; data on guests are updated monthly after FGUEST is updated.

FPEOPLE is a password protected database consisting of personnel information for current and previous employees (those who have terminated within the last five years). The database is organized by division. Each division's designated administrators have access to the data for their division via a unique password. So that anyone with the necessary password can easily get a list of the people in their division, the Toolkit contains two simple reports based on this file. Since the data are password protected, the master file description has been encrypted. A readable version of the master file description is stored under the name PEOPLE. This database originates from an IBM file maintained by the Personnel Department and is updated early every Friday morning on the VAX.

FGUEST is another password protected database. It contains data on current and recent guests, as well as visa data on alien employees. A readable version of the master file description is stored under the name GUEST. This database also originates in an IBM file maintained by the Personnel Department and is updated monthly.

From the Toolkit, one can generate a list of all employees and guests in a particular division. The Toolkit also provides the capability of generating several simple reports from the FPEOPLE database; however these can be accessed by password only.

I.F. Property Management

The Property Management system consists of three files, all of which are updated weekly, usually on Sunday or Monday. Reports on a particular piece of property as well as items assigned to a particular person are available through the Toolkit.

ASSET contains information about each 'piece of movable property' at the laboratory - what it is, what its value is, where it is, to whom it is assigned, etc. Pieces of property are included in this file for one or more of the following reasons -

1) worth more than $5,000,
2) sensitive item, i.e., small and easily stolen,
3) equipment pool items, e.g., typewriters,
4) fabrication equipment and their components.

PRUC (property record unit catalog) contains information on each type of asset by catalog number. Rather than have the ASSET file contain all the pertinent information about an IBM/PC for every PC at the laboratory, this information is stored just once in the PRUC file. Only the catalogue number is stored in the ASSET file.

MFRNAME contains a table of the manufacturer's names - a short version and then a longer, complete name.

I.G. Purchasing Files

The PARS database contains data on all outstanding purchase orders and those closed within the last 700 days. Data on purchase orders closed more than 700 days ago is not available on the VAX but is kept on the IBM in a history file. The PARS database is remade weekly, usually on Sunday or Monday. Many reports from this database are available within the Toolkit.

I.H. Sponsored Research

The Sponsored Proprosal/Project Tracking (SPPT) database contains data on sponsored research at the laboratory - Proposal Number, Title, the Principle Investigators, its status, funding, etc. This file is updated daily via the Gateway from a similar system that the Office of Sponsored Research Administration (OSRA) maintains on the IBM mainframe. The IBM system is updated daily by OSRA with regards to Proposal, Project, Funding, etc. It is updated monthly with regards to costs, invoices, and billing.

The data in SPPT are subsets of two files from the SPPT database on the IBM - PROPOSAL which contains general information on all proposals received by OSRA, and FUNDING which contains data on the funding status and change orders. From the Toolkit, the user can generate a report summarizing a proposal and its funding status - for a specified proposal number, for all proposals in a division, for all proposals within a range a dates, for all proposals by a particular principle investigator, or combinations of these.

I.I. Stores Files

There are two databases containing stores data. One database, consisting of the three files FALLMISA, FALLMISB and FALLMISC, contains weekly stores issues and returns. The second database FSWEET contains data on all items held in inventory at LBL and is thus used for inventory management.

FALLMISA, FALLMISB and FALLMISC are the three files comprising the weekly stores issues and returns database. FALLMISA contains data on each transaction, FALLMISB contains employee data, and FALLMISC contains the catalog number and description. The posting data in FALLMISA indicates when this transaction was entered in the ledger. From the Toolkit, the user can generate reports showing all transactions within a range of dates, or within a range of account numbers. These files are updated weekly from the sequential file wsi.dat.

FSWEET contains items in stores by catalog number. This file is used for inventory management and is recreated weekly from the sequential file sweet.dat. From the Toolkit, the user can generate reports showing all items with a given catalog number, or within a range of catalog numbers, or matching a particular description.

I.J. Travel File

The travel file, FTRAVEL, contains the data necessary for generating the Berkeley travel report (BTR). This file contains all open trips, i.e., trips for which some action is still pending. Once a trip has been balanced and closed, it is no longer in this file. From the Toolkit, the user can generate reports showing all trips for a given division, or for an individual traveller, or by trip number. FTRAVEL is recreated weekly from the sequential file trav0950.dat that comes from the IBM via the gateway.

I.K. Warehouse and Storage Files

The warehouse and storage file, FWAREHSE, contains data on equipment that has been stored at the warehouse in Emeryville - a description of the item, an account number, a consignor name, a DOE number, etc. The VAX Focus file is updated monthly from a Dbase3 file that is maintained in the warehouse. From the Toolkit, the user can generate reports by operating account, payroll code, description, consignor name, DOE number, or tag number.

II. Getting Started

To run Focus, one must have an account on the Computer Center VAX Cluster. If you do not currently have an account, you can obtain one from Pat Bean at X7008. You will be assigned a username and password. Also, you must be using a VT-100, or a terminal or PC that emulates a VT-100, in order for the Focus screens to work properly.

The Computer Center Cluster contains several VAXes; however, Focus is licensed for only CSA1; it will not run on any of the other VAXes. Furthermore, one must be logged on directly to CSA1. Focus will not run if one has done a 'set host' to get to CSA1.

Once you have an account on the VAX Cluster, you must log on. This can be done in several ways - by logging on directly, by using telnet, or through a personal computer (IBM-PC or Macintosh). If you are using a PC as a terminal, please read the next section. If you are using a terminal and can log onto the Vax directly, please skip the next section and go to Section II.B Logging on to the VAX.

II.A Using a PC as a Terminal

To log onto the VAX cluster from a PC, it is necessary to connect the PC to the VAX. This is done by running a program on the PC that allows the PC to emulate a terminal, and in particular, a VT-100 terminal. Several programs such as KERMIT (version 2.3 or later), PC-VT or PCPLUS perform this function on IBM's. Versaterm and telnet provide terminal emulation on Macintoshes. KERMIT, Versaterm, and telnet are supported by the work-station group (at X6858) and can be obtained from them in 50B-2239. For more help or assistance in using such a program, please ask at the Help desk at the computer center.

If you have Release 4.0 of PC/FOCUS, it contains Kermit and thus can be used as a terminal emulator. Please see Esther Schroeder for further information and documentation.

Once the terminal emulation package has been installed, you execute it at the PC prompt. Exactly what you type will depend on what program you have and how it has been installed. Once running, this program enables you to connect to the VAX. Please read the following Section for the next steps.

II.B Logging on the VAX

With most terminals at the laboratory, the new telephone system is used to specify the particular computer you want to access. No matter which terminal emulation package is used, the process of connecting to the CSA1 computer is the same. The connection process is initiated by getting the attention of the routing switch. With Kermit, this is done by typing c, or connect, at the kermit prompt. If this does not work, try <ctrl>]l (hold down the control key and the right square bracket key together, followed by the letter l). With Versaterm, hit the shift key followed by the return key. With both Kermit and Versaterm, the following line stating the available options will appear at the top of the screen.

ENTER - DIRECTORY(D), NETWORK(N), OUTSIDE(O), OR TERMINAL TYPE CHANGE(T) >

Type a 'd' followed by a return. Then a line will appear asking for the destination number, (which computer is desired), respond with csa1 and a carriage return. After the line DATA CALL INITIATED appears, hit the carriage return again. The computer will respond with its banner line and then ask for your

username. Once you have entered your username, hit the return again, and on the next line, the computer will ask for you password. Enter your password, followed by a return. Your password will *not* appear on the screen as you type it. This entire sequence should appear as follows:

```
ENTER-DIRECTORY(D),NETWORK(N),OUTSIDE(O),OR TERMINAL TYPE CHANGE(T)> d<return>
ENTER DESTINATION NUMBER > csa1 <return>
DATA CALL INITIATED <return>

Csa1 VMS5.3 CSA1 6420 Computer
Username: (username) <return>
Password: (password, not echoed) <return>
```

Telnet should be used by those people with Macintoshes on the Ethernet as it is not necessary to go through the phone system. After opening Telnet, select 'Open Connection' from the File menu. Type csa1 as the Session Name and then log in.

II.C Starting Focus

Once the log on process has been completed, you are now on the VAX and ready to start. As was mentionned earlier, you must be using a VT-100 for the Focus screens to work properly. This can be done by typing at the Vax prompt or 'Csa1>', the command 'set term/vt100'. Focus can be started by just typing the word 'focus' after the Vax prompt. The computer will respond with the Focus banner line and then its prompt, >>. At this point you may enter any Focus command, or you can start up the toolkit by typing 'ex tkit'. This entire sequence should appear as follows:

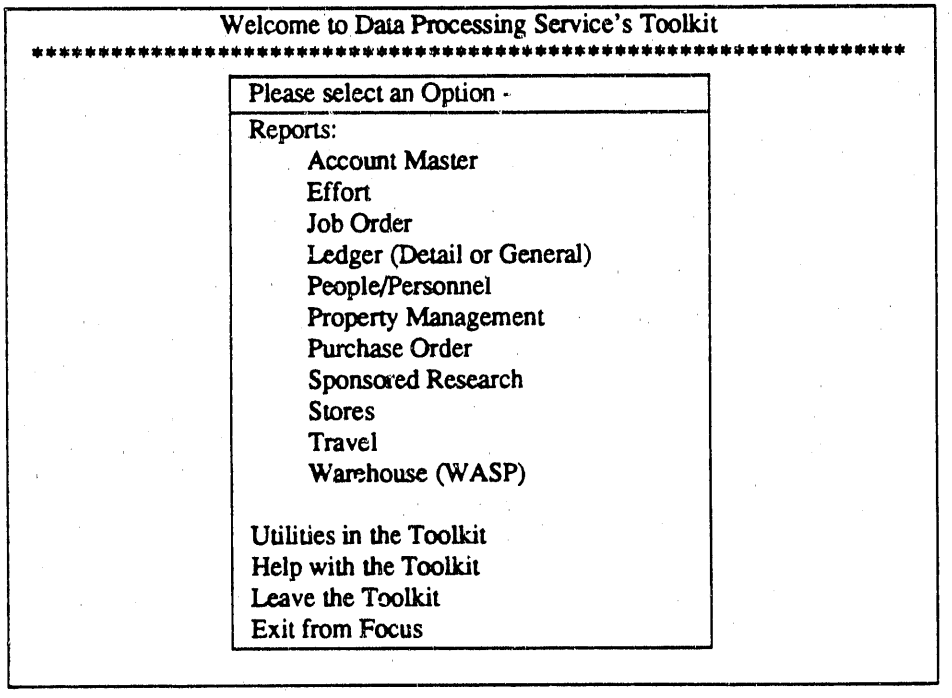
```
Csa1> set term/vt100 <return>
Csa1> focus <return>

FOCUS 5.2.2   VX5.2.2  CREATED 08/29/89
(C)Copyright 1987 Information Builders Inc.

>> ex tkit
```

It is not necessary to type in the line 'set term/vt100' each time that you log on. If it is included in your login.com file, it will be automatically executed each time that you log on. To check whether or not your login.com file includes such a line, enter 'type login.com' at the Vax prompt. If the login.com file does not include this line, you should include it using any editor with which you are familiar.

III. Using the Toolkit

For most screens, on-line help is available in the Toolkit. By using the on-line documentation, the user should be able to determine for himself what is available in the Toolkit, and how to access it. This hard-copy document will not attempt to cover every feature of the Toolkit, but will give an overview of how the Toolkit is structured and what kinds of data and reports are available.

The Toolkit is started by typing 'ex tkit' at the Focus prompt, '>>'. This does some initialization to enable Focus to locate the main laboratory-wide administrative data files. After a few seconds, the following opening screen will appear.



At this point the user may choose to generate a report on one of eleven different topics, run one of the available utilities, look at the on-line help, leave the Toolkit and return to native mode Focus, or exit from Focus entirely and return to the Csa1 prompt. When this menu appears, the row 'Reports:' will be highlighted. This is not a valid option, but serves as a subheading for the following eleven categories. The user indicates his choice by moving the highlight bar to the item of interest and then hitting the return key. The highlight bar is moved by using the up and down arrow keys, or by typing the first letter of an option. Typing 'e' for example will move the highlight bar to the row 'Effort'. Typing 'p' repeatedly will cause the highlight bar to cycle over the three entries starting with 'p' - People/Personnel, Property Management, and Purchase Order.

All of the menus in the Toolkit have the same structure as this opening menu. The upper portion lists the available options while the lower portion offers help and navigational capabilities. The help is context sensitive and will explain the options available in the current menu.

Section III.A will cover the main reports available in the Toolkit with a subsection for each of the eleven topics. Section III.B will cover features that are common to many reports, e.g., specifying account ranges and getting hardcopy output. Section III.C will cover various utility options that are available in the Toolkit. Focus news at LBL is one of the options under utilities. The user should look at this portion periodically to see if new features have been added to the Toolkit, or if any changes have been made to some of the Focus databases. Section III.D will briefly cover the on-line help facility. The remaining two options 'Leave Toolkit' and 'Exit from Focus' are self explanatory.

III.A Reports

Many reports are available in the Toolkit. As shown in the opening Toolkit menu, they have been grouped into the eleven broad categories - 1) account master, 2) effort, 3) job order, 4) ledger, 5) people/personnel, 6) property management, 7) purchase order, 8) sponsored research, 9) stores, 10) travel, and 11) warehouse.

For each of these categories, the Toolkit contains "canned" reports that the user can easily customize to suit his own needs. There are more reports available for some topics than for others. By looking at the menus and the on-line help screens, the user can determine what reports are available on a given topic. Once a particular report has been chosen, the Toolkit will prompt for the required parameters necessary for that report, e.g., month of interest, cost account, etc. Some of the reports, particularly those dealing with effort or ledger files, are based on similar reports that are routinely produced on the IBM mainframe, and can thus be identified by the same three-letter acronym.

For some of the eleven categories, the Toolkit lets the user design his own report entirely, by typing in the proper FOCUS code. These are called "editable reports." The Toolkit provides a skeleton outline which can be used as a start for a report. For people who are new to FOCUS and the Toolkit, these "editable reports" are not recommended - they are intended to be used by people who have some knowledge of FOCUS coding and how a FOCUS report is generated.

Upon selecting one of the eleven broad categories, a second menu will open up. No matter which category is chosen, this submenu will have a standard form - the user can select a particular report, get more information on the reports available from the help screens, return to the preceeding menu by selecting 'None of the above', return to native Focus, or return to the Vax. The following sections contain more information about each of the eleven categories.

III.A.1 Account Master

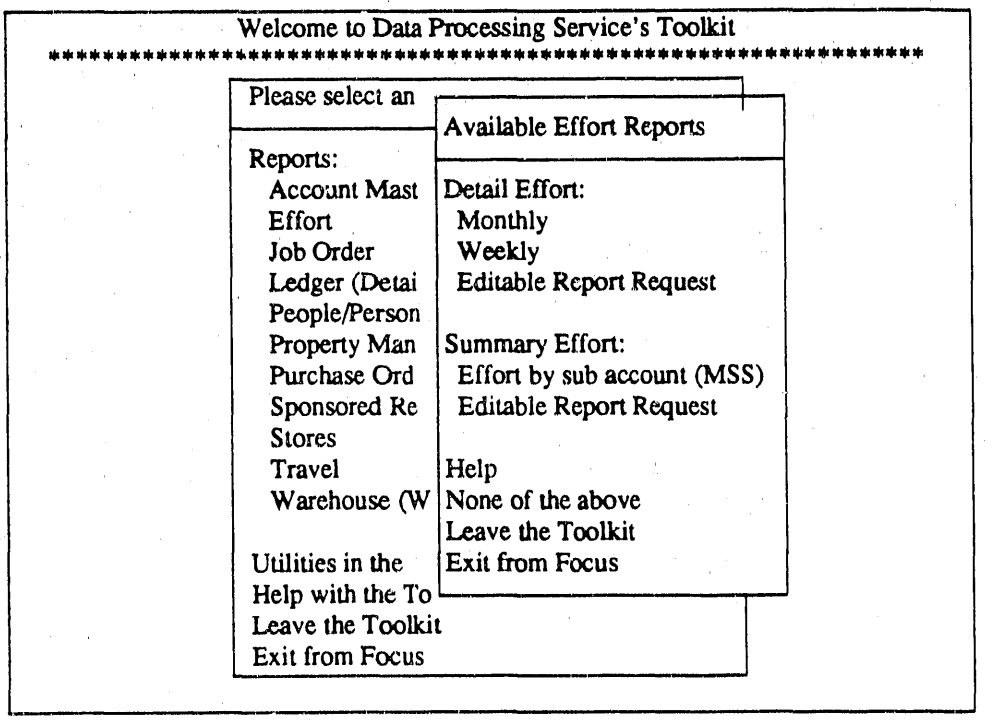
There are two options or reports based on the account master file - 1) check whether a particular 6-digit cost account is valid, or 2) get a list of all active cost accounts in a specified division. To check for a valid cost account, you will be asked for the account of interest. For a valid account, the report shows related data items currently stored in the file, i.e., the identifying labels, the division responsible for the account, etc. At this point, the user may inquire about another cost account or just hit return to go back to the account master file subwindow. The following screen shows the response for a check on the cost account 302501.

```
                Lawrence Berkeley Laboratory
              FOCUS SYSTEM - Cost Account Inquiry

Prime account: 3025  -  DATA PROCESSING SERVICES
Cost account: 302501  -  GENERAL

     Open Date:        810501          Close Date:      0
     Reopen Date:           0          Change Date:     810501

     Division:             AD
     Department:
     Program Code:       9030
     Status:
     Conversion:

     Next account No. (Blank to quit):
```

The second option is a report of all active accounts in a specified division. On selecting this option, the user will be presented with a list of the divisions at the laboratory and asked to choose one. The report will group the accounts by the prime account. For each 6-digit cost account, the open or reopen date will be printed as well as a program code.

III.A.2 Effort

Toolkit offers several effort reports; all of which contain data on effort in hours (or months), not in dollars. As it is not feasible to list them all in one submenu, the user may have to go through one or more submenus to get to the actual report of interest. The first effort menu summarizes the types of effort reports available. The reports are grouped into the two broad categories - "detailed" reports, or "summary" reports. Detailed reports contain data on employees whereas the summary reports do not. The detailed reports can contain weekly or monthly data. Furthermore, whether interested in detail or summary data, one can obtain a "canned" report by specifying a few parameters of interest, e.g., cost account, or can design a custom report by selecting the "editable" option. However, this option is recommended only for those who have some knowledge of Focus and how it generates a report.



The next three sections will cover detail effort reports, summary effort reports, and editable effort reports respectively.

III.A.2.a Detail Effort Reports

Whether using monthly or weekly data, the detailed effort reports follow the same structure. The columns contain data for a month or week respectively. Monthly effort reports show effort for all months of the current fiscal year for which data are available. Thus these reports are quite narrow early in the fiscal year, but get very wide by September. The weekly effort reports cover at most 7 weeks worth of data with one column per week of data.

If the user selects either the weekly or monthly option under "Detail Effort", a screen showing the available effort reports will be displayed. The options are summarized in the following table.

Detail Effort Reports

	Report Name	
Major Sort Key	Weekly	Monthly
Cost Account	WES	MES
Employee No.	WEM	MEM
Job Order Number		MEJ
Payroll Account	WEP	MEP

In summary, both weekly and monthly effort data can be listed or sorted by cost account, by pay account, or by employee number. Furthermore, monthly data can also be listed by job order number. Depending upon the report selected, the user will be asked to specify the required cost or pay account, employee number(s), and or job order number. Details on how to enter cost and pay account ranges are contained in Section B.3.

If the user selects a Weekly Effort Report, he will be asked to select the weeks of interest in a screen like the following. Although the user must enter the low week number and the high week number, he is told the number of the last week in the effort database and its date.

Screen for Selecting Weeks to be Covered in
Report on Weekly Effort

The last week in the weekly effort data base is 26
Week ending date is MAR 31

ENTER THE WEEKS THAT YOU WISH REPORT TO COVER
(TO A MAXIMUM OF 7)
LOW WEEK NO.: HIGH WEEK NO.:

HIT RETURN TO CONTINUE
X TO EXIT

NOTE: BE SURE TO INCLUDE A LEADING BLANK IN THE LOW AND HIGH WEEK NUMBERS IF THE NUMBER IS LESS THAN 10.
******** USE TAB KEY TO MOVE BETWEEN FIELDS ********

III.A.2.b Summary Effort Reports

The only summary effort report currently in the Toolkit shows monthly effort by cost account. This report has the same format as the detail report, MES but with no employee information, i.e., it is a summary version of MES. Each row corresponds to the effort for a particular payroll account within the cost account of interest. At the far right of each row are two additional columns - 1) a total over all months in the current fiscal year, and 2) an average monthly effort. Subtotals are calculated for each 6-digit cost account, as well as for the 4-digit prime accounts.

On selecting this option, the user is asked for the cost accounts of interest. Please refer to section B.3 for information on how to enter these ranges.

III.A.2.c Editable Effort Reports

On selecting this option, the user is given a few brief instructions on how to create a Focus report, and a sample TABLE request on the detail monthly effort file, FALLMEFF. He can 'edit' this request, run it, and save it. While editing, it is possible to get a list of the fieldnames and their aliases. Although some help is available on-line, the user should have some understanding of how a TABLE requests works.

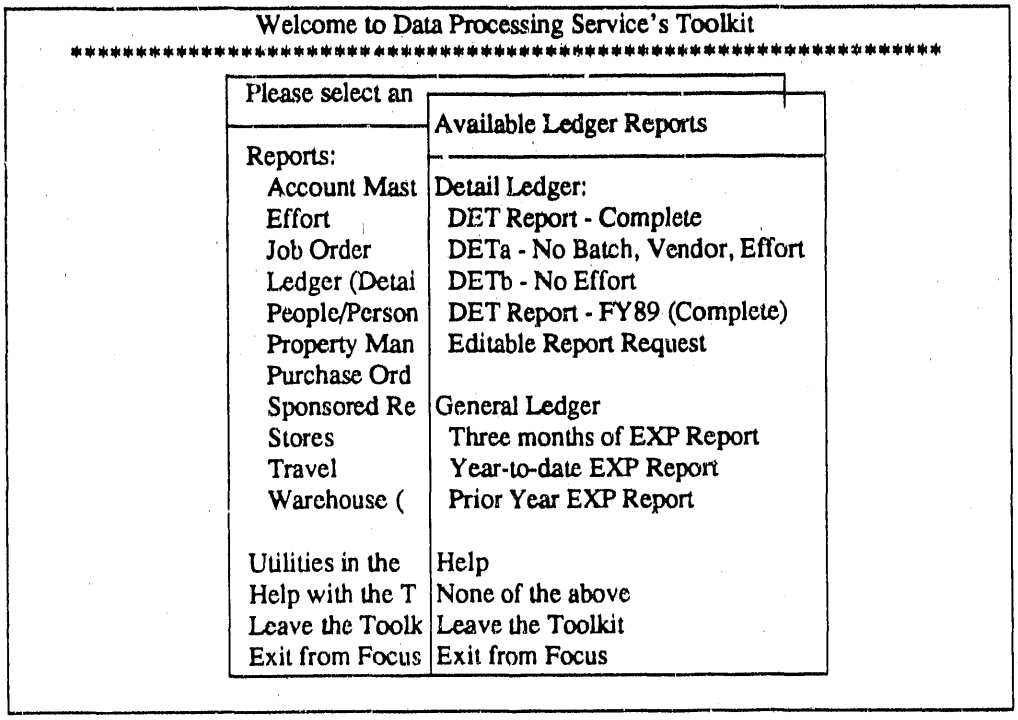
III.A.3 Job Order Menus

Several reports are available from the Job Order System. Although the user interface has been modified since the original Toolkit, the reports are essentially unchanged. All of the reports can be run for 'open' jobs, for 'closed' jobs, or for both. The available reports are

1) List of open, due and close dates for a specific job order,
2) Effort hours and wage expense (Actual and estimated),
3) Sum of the effort hours and wage expense for a cost account,
4) List job orders and shops by due date for a cost account,
5) List project engineer and extension plus estimated costs for effort and material for a specific job order number,
6) Sum effort hours by job order number and by cost account for a specified pay account or shop,
7) An offline report showing all the totals for a range of job order numbers,
8) All the totals for a specific job order number, and
9) The basic format A report inquiry.

III.A.4 Ledger (Detail or General)

Toolkit II generates three broad types of ledger reports from within II, the detail ledger or 'DET' report from the Detail Ledger, the expense statement or 'EXP' report from the General Ledger, and a customized report from the Detail Ledger. The following three subsections will cover each of them in turn.



III.A.4.a Detail Ledger Reports

Monthly, a 'DET' Report is generated on the IBM mainframe for most department administrators from the Detail Ledger. This report contains all items from the detail ledger within the cost account of interest. Specifically, for each item in a given cost account range, this report contains the expense type, the entry type, the transaction date, a description of the transaction, a reference no., a batch number, a vendor code (if applicable), effort in months (for labor transactions), and a cost or lien value. Subtotals are presented for each expense type, for each 6-digit cost account and for each prime account.

The Toolkit provides the ability to replicate this report on an ad hoc basis for a user-specified month and for any cost account(s) of interest, or to generate narrower versions of this report that will fit within an 80-character page.

The complete 'DET' report as described in the preceeding paragraphs is 118 columns wide. This report is listed as the first option under 'Detail Ledger'. The next two choices, 'DETa' and 'DETb' are narrower versions that can fit within an 80 column page.The DETa Report does not include the batch number, the vendor code, or the effort (in months). The DETb Report does not include the effort (in months). Also, the

cost or lien figures are not listed in separate columns with the appropriate heading, but are listed in one column under the heading 'Amount'.

The fourth item listed under 'Detail Ledger' generates the complete 'DET' report for a user-specified month in FY89. Due to a considerable change in the master file description for the detail ledger in 1989, it is much harder to generate a 'DET' report for years prior to 1989. The narrower reports, 'DETa' and 'DETb' are not available for FY89.

In all of these DET Reports, expense type 02 (Invoice Recharges or Billings) is only included for the prime account 3580. For all other prime accounts, expense type 02 is not included. This is the same procedure as is followed on the IBM Mainframe.

On selecting one of the 'DET' report options, the user will be asked to specify the month of interest, and the cost account ranges. Please refer to section B.3 for information on how to enter these ranges.

III.A.4.b General Ledger Reports

Monthly, an Expense Statement or EXP Report, is generated on the IBM mainframe for most department administrators from the General Ledger. This report contains all expenses within the cost account of interest. The expenses are summarized by expense type and then further summarized into 1 - Supplies and Expenses, 2 - Payroll Expenses, 3 - Support Burden, and 4 - Other Expenses. Each column contains one month's data. Early in the fiscal year, this report fits easily on an 80 column screen; as the year progresses, the report gets wider and wider as new columns are added.

Within the Toolkit, it is possible to generate this report for a user-specified cost account,

1) for any three month period in the current fiscal year,
2) for all of the current fiscal year (which may be a very wide report), or
3) for an entire prior fiscal year (FY86, FY87, FY88 or FY89).

If the user selects the first option, he will be asked to specify the starting month for the report. If the user selects either of the first two options, he will be asked whether he wants a report for each cost account in the specified range or just one report summarizing all cost accounts in the range. If he decides on one report per cost account, he will have another chance to ask for a summary report after looking at the individual reports. On all options, he will be asked to specify the cost accounts of interest. (Instructions on how to enter these ranges are in section B.3.)

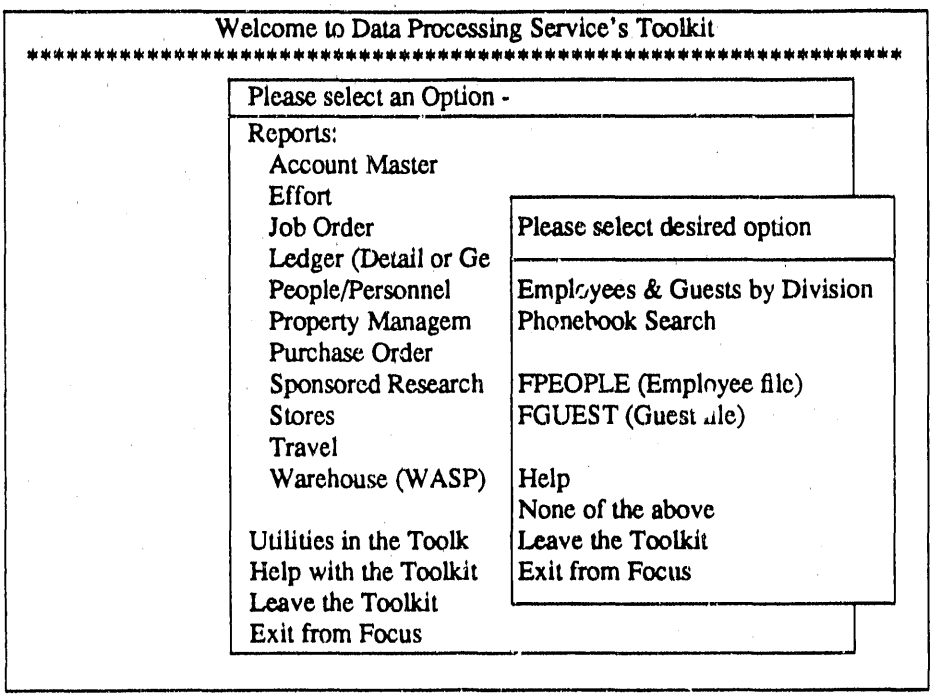
III.A.4.c Editable Ledger Reports

On selecting this option, the user is given a few brief instructions on how to create a Focus report, and a sample TABLE request on the detail ledger file, FDETLDGR. He can 'edit' this request, run it, and save it. While editing, it is possible to get a list of the fieldnames and their aliases. Although some help is available on-line, the user should have some understanding of how a TABLE requests works.

III.A.5 People/Personnel Data

There are several files at LBL containing personnel information - some contain general data that are available for everyone while some files contain very sensitive data. The Toolkit contains reports from both sets of databases; however reports from the sensitive databases are available by password only.

On selecting the 'People/Personnel data' option in the opening Toolkit menu, the screen appears as follows. The first two options, 'Employees & Guests by Division' and 'Phonebook Search' can be accessed by anyone. The next two options 'FPEOPLE' and 'FGUEST' are accessible by password only.



The first option generates a list of all employees and guests in a particular division. The personnel are listed by mail-stop within payroll account numbers. The user is given the option of including all payroll accounts within the selected division, or just a user-specified subset.

The second option, 'Phonebook Search' accesses the Computer Center LBLPHONE facility. The computer center maintains a file of the LBL-addresses and phone numbers of all laboratory personnel as well as a facility for searching this database. After the user enters a search string, the computer responds with a list of all employees who match that string, whether in the first or last name. As an example, a search on 'white' yields the following.

Information from LBL Electronic Phone Book

Ext.	Name	Payroll	Mail stop	Bldg	Office	
4165	WHITE, LORETTA 9015	69-102	69	104	4165	
4609	WHITE, MARY	9248	50B-3238	50B	3209D	4609
4935	WHITE, NEWTON N	9033	901	901	101	4935
4533	WHITEMAN, RICHARD E	9138	46-125	46	157	4533

The next two options, 'FPEOPLE' and 'FGUEST' are accessible by password only. Upon selecting one of them, the next screen will ask for your password. Be careful in typing it as it will not be echoed on the screen. The validity of the password is not checked at this time; if it is invalid, you will receive an error message when you try to access the data file whether through a canned report in the Toolkit, or from one of your own reports.

After you have entered your password, the following screen will appear. The first two options provide general lists of all employees in a selected division. These reports are generated from the FPEOPLE file. There are currently no reports in the Toolkit based on the FGUEST file. The third option lets you return to native Focus to run one of your own fexes. The fourth option which is still just being developed lets you modify some fields in the FPEOPLE database.

```
**************************************************************************
                    Personnel Data Base Menu                    TKPOPMN

You now have access to the data base if you entered a valid password.
At this time, the following options are available. Please type the
letter specified before your desired choice.

     A   Report of all employees in a division as of a given date
     B   Report of all employees in a division, their employee numbers
         payroll numbers, and social security numbers.

     C   Run your own report either interactively or by executing
         any 'fex' that you may have stored in your directory.

     D   Modify the fields of the data base for which the division
         is responsible (still being developed - use at your own
         risk).

     N   None of the above, return to preceeding screen.
                 RESPONSE  A
```

Since both FPEOPLE and FGUEST are password protected, their master file descriptions have to be encrypted and are not eye-readable. Eye-readable versions of the master file descriptions are stored in PEOPLE and GUEST respectively.

III.A.6 Property Management System

There are two options or reports based on the property management system - 1) 'Asset File Inquiry', and 2) 'Property Clearance Report'. The first report presents all of the information from the ASSET file on a particular piece of equipment. To get this report, the user must supply the 'asset number' of the equipment. The following example shows a report for asset number 6154269. This report is generated very quickly as the asset file uses the equipment number as an index.

```
                    LAWRENCE BERKELEY LABORATORY
                PROPERTY MANAGEMENT AND ACCOUNTING SYSTEM
                   FOCUS SYSTEM - ASSET FILE INQUIRY

PROPERTY NUMBER: 6154269   ASSET STATUS: 0     ACQ DATE: 8909 DEPR DATE: 8909
   MANUFACTURER: IBM                      PURCHASE ORDER: 3307706   LINE: 01
          MODEL: 8580                      PURCHASE ACCT: 302501
   NOMENCLATURE: COMPUTER-PC                   PUR AMOUNT:       4152.00
  SERIAL NUMBER: 72-7071045                    CAP VALUE:           .00
 CATALOG NUMBER: 020502                        COST CODE: D CAPITAL CODE: 1
  ASSET ACCOUNT: 8                DATE/CODE  DOCUMENT NO:         ATTACH: BG
          CLASS: 1050   POSTING: 891107 45    REQUESTOR: BACKUS AW
           TYPE: 04     CAPITAL: 891012 02 TECH REMARKS:
           LIFE:  7       TRANS: 891107 45  PROP/OTHERS:       ASSET ID: LV
 COMMODITY CODE: K       SURVEY: 8911   45    COMPONENT:          PLANT:
 SENSITIVE CODE: A
       FSC CODE:                  BUILDING: 065    ROOM: 0109    AREA:
                                 USER NAME: SCHROEDER EC       EMP NO: 793450
   POOL CONTROL:              USER ACCOUNT: 302501
PROPMGT REMARKS:                 NEXT ASSET NUMBER (BLANK TO QUIT):
```

As the line at the bottom righthand corner of the screen indicates, after looking at the report for one piece of equipment, the user can get the report for another piece of equipment by entering its number, or can return to the preceeding menu by just hitting a return.

The second report generates a list of all property assigned to an LBL employee. On selecting this option, the user is asked to enter the person's name. A report is then generated listing all records from the ASSET file that contain the user-specified name. As the ASSET file is quite large with over 17,000 pieces of equipment, it takes about 30 seconds to generate this list.

III.A.7 Purchase Order System

This database contains active purchase orders only and is updated weekly, usually on Sunday or Monday. Toolkit II provides the capability of retrieving and displaying data from this file. On choosing this option from the main Toolkit menu, a submenu appears offering to retrieve data by

1) Purchase Order No.,
2) Job Order Number,
3) Requisition Number,
4) Requester,
5) Account Number, or
6) Account Range.

On selecting one of these six options, the user is then asked for the required piece of information - the purchase order number, job order number, etc. Regardless of which option was chosen, the resultant report will resemble the following example.

```
                    Lawrence Berkeley Laboratory
                     Purchase Order 33345A6

Requisition : 452190                  Job Order Number :
Buyer       : AJIAKE    N             Requested by     : ROOS
P.O. Date   : 89/09/01                 Date Needed      : 89/09/15
Estimate    :       2,800.00          Description      : ADAPTOR
Seller      : BIT 3 COMPUTER          Agreement #      :

                                                    Quantity
#   Account  Received            Cost    Ordered    Received
-   -------  --------            ----    -------    --------
01  444401   89/09/22        2,665.00          1           1
02  444401   89/09/22          135.00          1           1

*TOTAL PUR_ORDER 33345A6
                             2,800.00          2           2
```

III.A.8 Sponsored Research

On selecting this option, another menu appears. Currently this menu offers only one Report (option 1). Future reports A, B and C will be developed soon. Thus the real choices at this point are '1' to generate the Proposal/Funding Status Report, to leave the Toolkit, or 'e' to exit from Focus and return to the Vax prompt.

```
                SPONSORED RESEARCH STATUS CHECK
                -------------------------------
Enter OSRA Proposal No. (if known):
Or, enter one or more of the following:
   Division Code:
   (ADMN, AFRD, ASD, CBIO, CMBD, COMP, DIR, ENG, ENGS, ES, GS,)
   (LS, MCSD, NS, OHD, PLAN, PHYS, and RMRB are valid choices.)

   Proposals Received after MM/YY (e.g., 01/87):      /
   (Leave blank for all Proposals)

   PI's Last Name:
   (Leave blank for All Division PI's)

INSTRUCTIONS: To move around the screen, use tab or arrow keys.
After you have entered your selection criteria, hit the return key.
To return to preceeding menu, hit PF4 or type 'none' as the Proposal
Number.
```

On selecting 1, the above screen appears asking for information on the Proposals in which you are interested. You can identify the proposals in one or more of four ways - by 1) Proposal number, 2) Division Code, 3) date received by OSRA, or 4) PI name. The more selection criteria used, the fewer proposals will meet these criteria, and the smaller the resultant report will be. Be sure *not* to hit the return key until you have entered all the information that you intend to. In more detail, the four requested items are as follows -

1) Proposal Number -
   The Proposal Number contains 9 characters. The first two characters are the letters BG, the next two characters are the year number, the next three characters are an identifying number, and the last two digits are a sequence number. There are no blanks or underscores. If you know the Proposal No., enter it. If you know only a portion of the number, enter that portion and then use the tab key to go to the next item. If you are interested in a group of proposals, enter nothing but use the tab key to get to the next item.

2) Division Code -
   If you are interested in Proposal(s) for only one division, enter its code; the valid choices are listed. If you are not sure of the Division, or are interested in Proposals for more than one Division, leave this selection blank.

3) The date -
Either enter a month and year to receive all proposals received in OSRA *after* that date. Leave blank if the date is not of interest.

4) Name of the Principal Investigator -
If you are interested in Proposals by a particular Principal Investigator, enter his last name here. You do not have to enter his/her entire name, but what you do enter must be spelled correctly. If you are interested in Proposals by several different people, leave this item blank.

In entering these selection criteria, it is possible to tab as well as to use the arrow keys to move the cursor from one item to another. To enter an item, make sure that the cursor is correctly positioned for that item before you start typing. When you are satisfied with what you have entered, hit the return. This tells Focus to search for proposals that meet these criteriia.

After Focus has identified the relevant proposals, a screen will appear saying how many proposals were found. If Focus has identified a large number of proposals, you may not want to see them all but would like to restrict your selection further. Although each proposal selected will generate one screen containing summary type information, you do not have to look at them all. If you decide to enter a more restrictive set of selection criteria, type in the word 'revise' where indicated; otherwise just hit enter to see the current list of proposals.

```
          SPONSORED RESEARCH PROPOSAL SUMMARY INFORMATION
                      5 proposals match your request.

   Type -       Available  options -
  'blank'       No details, continue on to next proposal
    D           Detailed status after browsing remaining proposals
    A           Details on all proposals with no more browsing
    X           To leave this menu with no more browsing
    ?           More information about this screen

Enter an option (blank, D, A, X, or ?):      then hit return
-------------------------------------------------------------------
Proposal  1 :      BG8304603        Sponsor:  UNIV OF SOUTHERN CALIFORNIA
                                    Account:
PI Name:           MCEVILLY,        THOMAS    V          (  586575   )

Title:             CALCRUST 1990


Proposed Period:   02/15/90  To  03/31/91
```

For each proposal matching your request, you will get a screen like the above. The upper half of the screen describes the options that are available in this screen with the second line indicating how many proposals you have selected. The lower half of the screen contains summary information for a proposal that matches your selection criteria. The proposals that you selected are indexed in this screen (the number just to the left of the Proposal Number) so that you can easily tell how many summary screens you have already seen,

and how many remain. As the upper half of the screen indicates, several options are available at this time. By typing '?' or 'h' as an option, you will see a help screen that describes the options in some detail. The contents of this screen can be summarized as follows.

1) Just hit the return key, or type a 'd' followed by the return key to browse one-by-one through the proposals matching your selection criteria. The 'd' indicates that later you want to see the details for the particular proposal. Hitting just the return key indicates that you are not interested in that particular proposal. It is possible to browse in this manner through the summary information on all proposals that you have selected. After the last one, you will see details on those proposals that you marked with a 'd', or you will be returned to the opening screen requesting a new set of selction criteria if you did not mark any with a 'd'.

2) To get out of this series of screens, type an 'a' or an 'x' followed by the return key. An 'a' indicates that you want to see the details on all the proposals that you identified and do not want to have to browse through these summary screens and flag them one-by-one. You may type an 'a' on any summary screen; you will get the details for all the proposals. An 'x' indicates that you are no longer interested in browsing - either you have found what you want, or you are no longer interested. If you have flagged one or more proposals with a 'd', you will see the details on those proposals. If you did not flag any, you will be returned to the opening screen for this report.

3) A '?' or an 'h' followed by a return will bring a help screen that essentially covers the above.

If you got to the end of the list without marking any proposals (you were not interested in any of them), you will be returned to the screen in which you may specify a new set of selection criteria. If you did mark one or more of these proposals, another report will be generated containing the detailed status information.

After looking at the detail report, you will have the option of getting hardcopy output. This is described in Section B.3. After that screen, you will be returned to the opening screen asking for you to specify selection criteria for the proposals of interest. You may now start entering a new set of selection criteria. If you are no longer interested, type 'none' as the proposal number, or hit the F4 key to return to the previous menu.

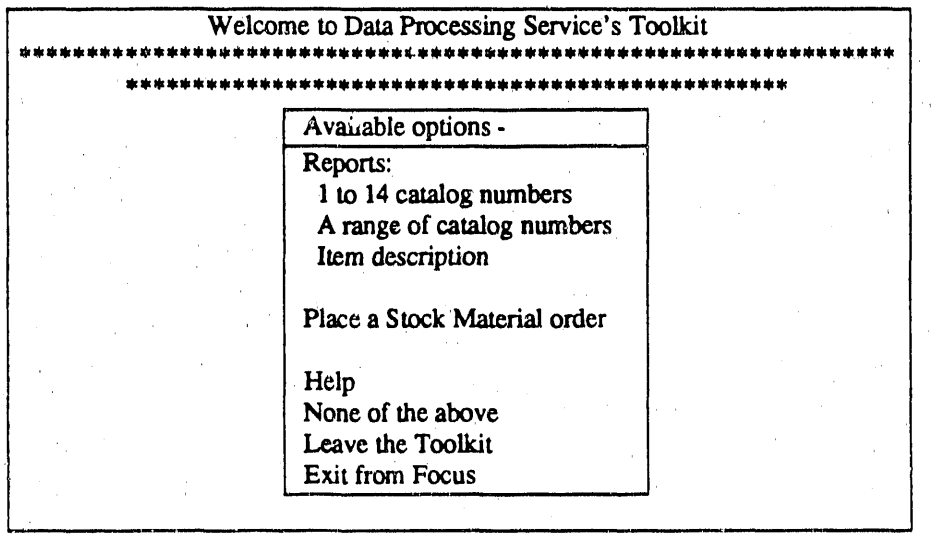
III.A.9 Stores

There are two databases containing stores information - the FSWEET file contains data on all items held in inventory and is used for inventory management; FALLMISA contains weekly stores issues and returns data. Toolkit II generates reports from both files and allows the user to place stock material orders. The latter is still being tested and is thus only available to some groups.

Thus on selecting the "Stores" option in the main Toolkit menu, the user is presented with a submenu offering the two choices of "Inventory Management System" and "Stores Issues and Returns". The next two sections will cover these two choices.

III.A.9.a Inventory Management

Selecting "Inventory Management System" leads to the following submenu.

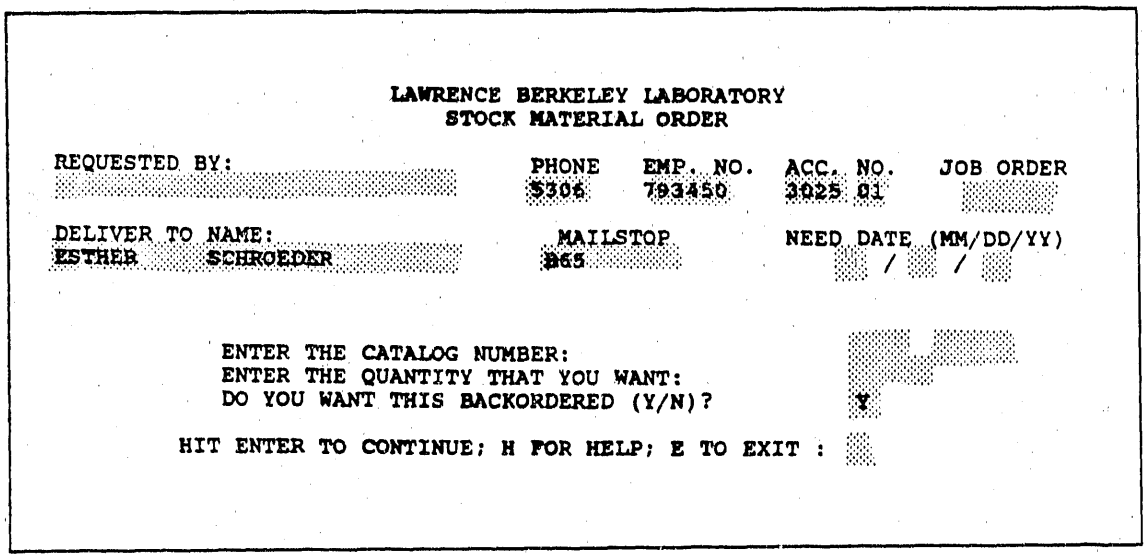


At this point, the user may generate a report on items in inventory, or can place a stores order. The report can be generated in any one of three different ways - by entering one to fourteen catalog numbers, by entering a range of catalogue numbers, or by entering the item description. The first two options assume that the user knows the catalogue numbers of the items of interest. Note that it is necessary to enter all nine digits of the number. The last option is most useful when the user is looking to see what may be available in Stores and does not know the catalogue number. This report will contain all items whose *short description* contains the user specified characters. Depending on the item of interest, it may be difficult to match what has been entered in the description. It may be necessary to enter just a few characters to retreive a long list of items in the hopes of finding the right one. Please see section B.1 for information on how to look at a long Focus report.

Aside from generating reports from the inventory database, one can also place a stock material order. As this feature is currently being tested, it may be used only by those who have agreed to test it and who know the password. On selecting this option from the above menu, the next screen will ask for your password. As you type your password, it will not be echoed on the screen. If you do not enter the correct password, you will be returned to the above menu.

If you have entered the correct password, you will be asked for a cost account and an employee number. The cost account will be checked against the Focus file GLMASTER to insure that it is a valid account. If it is not valid, you will not be able to continue. If the employee number is not found, you will be given the option of continuing anyway or of entering another number.

After entering the employee number, the following screen appears. If a valid employee number has been entered, the name, LBL phone, and mail-stop of that employee have already been entered.



On this screen, all items except for the cost account and the employee number can be changed. The deliver-to-name, mailstop, catalogue number and quantity must be entered. Use the tab-key to move the cursor around the screen. Hit the return key when you are done and wish to order the specified item.

If the catalogue number is valid, a line will appear at the bottom of the screen containing some information about that item including where it is stored, how many of the item are available in the storeroom, and the cost of the item. Knowing where the item is stored allows you to estimate how quickly you might receive the item. If this is the desired item, enter an 'O' to place the order; otherwise just type an 'E' to exit without ordering the item. Whether or not the item is ordered, upon hitting a return, the user will be returned to the above screen where he can place another order, or can exit. To exit from these screens, be sure that the cursor is to the right of the line near the bottom of the screen (HIT ENTER TO CONTINUE, H FOR HELP, E TO EXIT) and enter an 'E' followed by a return.

After exiting from the ordering screen, the original screen asking for a cost account reappears. The user may now enter another account number and then more orders if so desired. If another cost account is entered, the user is again asked for an employee number; he can use the same one as entered previously or change it.

While at the screen asking for a cost account, the user can also list the items already ordered by entering an 'L'. As the following example shows, this listing summarizes the current order showing how many of each item were ordered, the cost of each item, and the cost of the entire order. If the order contains any mistakes or items that were ordered inadvertently, the order can be deleted at this time by typing a 'D' before the row to be deleted.

```
                CURRENT LISTING OF STOCK MATERIAL ORDER ENTRIES

     CATALOG      ACCOUNT          UNIT   BACK
     NUMBER       NUMBER     QTY  ISSUE  ORDER      DESCRIPTION          COST ($)
     ----------   -------   -----  -----  -----  --------------------  ----------

_    7510-12212   3025-01      10   EA     Y     PENCIL CHINA MRKNG RED       1.09
_    7510-12218   3026-01      13   EA     Y     PENCIL COLORED WHITE         1.43
_    7510-12215   3026-01      22   EA     Y     PENCIL COLORED BROWN         2.99
D    7510-12186   3026-01      17   PG     Y     LEAD STD PENCIL F            7.65


          TOTAL QTY/COST :      62                                           13.16
                  HIT ENTER TO LIST MORE; B FOR BEGINNING :
                ***  TYPE D TO DELETE INDIVIDUAL CATALOG NUMBER
```

III.A.9.b Stores Issues and Returns

On selecting this option, the user is given the choice of 1) a "standard stores report" or 2) an "editable report". The "editable" option lets the user design his own report on the Stores Issues and Returns database - FALLMISA and is recommended only for those who have some knowledge of how FOCUS works.

The "standard stores report" shows all transactions within a range of dates, within a range of cost accounts. On selecting this option, the user is then asked whether to include all dates or only a user-specified range of dates. Since this file (FALLMISA) contains transactions for the current fiscal year only, all dates means everything in the current fiscal year. If the user is interested in only a limited range of dates, he will be asked to enter the starting date and then the ending date, both as month-day (MMDD) entries. The following screen shows the report that was generated for the cost account 3025-01 for March 1990.

STORES ISSUES/RETURNS FOR PERIOD 0301 TO 0401

ACCOUNT	EMPLOYEE NAME	PR	DATE	DESCRIPTION	QUANT	COST
302501	BAGOT	WC 9025	900322	PAPR WHT 8.5X11 HI-SPD	1000	2833.00
	WILLIAMS	VL 9025	900327	CARTRIDGE LASER 2	5	397.37
			900327	FILE FLOPY DISK 2481SY	1	12.28
			900327	PAPER PRINTER 9-7/8X11	3	112.36
			900314	RULER WOOD 12 IN	2	.36
			900314	BOOK ENDS STEEL 4-3/4	5	4.05
			900314	DISPENSER SCOT TPE 3/4	5	5.79
			900314	PERFORATOR 3 HOLE NADJ	5	20.97
			900314	STAPLER DSK TYP NO 400	5	42.76
			900314	TISSUES FACIAL BAYWIPE	10	2.27
			900306	PERFORATOR 3 HOLE NADJ	1	4.19
	* ACCOUNT ** SUB-TOTAL * 302501					3435.40

If the 'Editable Stores Report' option is selected, the user is given a few brief instructions on how to create a Focus report, and a sample TABLE request on the stores issues and returns file, FALLMISA. He can 'edit' this request, run it, and save it. While editing, it is possible to get a list of the fieldnames and their aliases. Although some help is available on-line, the user should have some understanding of how a TABLE requests works.

III.A.10 Travel

Currently, the reports available from the travel file are unchanged from Toolkit I. There are several options available but the final reports contain information on open trips for one or more travelers. In the first screen, the user is asked to specify whether he is interested in a 'standard' Berkeley Travel Report (BTR), or a 'narrow' BTR report. The narrow report fits easily on an 80 column screen where as the standard one does not.

The next screen asks the user to specify whether he wants information sorted by trip number or by traveler's name.

1) Sorted by trip number -
The user can specify one trip number or a range of trip numbers.

2) Sorted by traveler's name -
The user can get a report on an individual or on all travelers within a specified division.

Remember that this file contains all open reports and those that have closed within the current month.

III.A.11 Warehouse (WASP)

Reports on equipment stored at the warehouse can be generated by searching on any one of the following -

1) Consignor name,
2) Cost account,
3) Description,
4) DOE Number,
5) Payroll Code Number, or
6) Tag number.

After chosing one of the above, the user is then asked to enter the required name, cost account, etc. If the user selects the third option - description, he can search by matching the leading 4 characters in the description or by matching up to 10 characters occuring anywhere in the description. The former will be faster, but the latter will probably uncover more matches.

III.B Common Report Features

This section covers features that are common to several reports. Subsection 1 discusses how to look at a FOCUS report on the screen and subsection 2 covers the many ways in which hardcopy output can be produced. Subsection 3 covers how to specify the desired cost account or payroll account ranges which are needed for many reports.

III.B.1 Reading FOCUS Reports

Section III.A showed how to generate FOCUS reports within Toolkit II; this section covers how to look at a report once it is generated. While Focus is generating the requested table, various messages will appear on the screen. When it is finished, a message will appear indicating how many records are in the report, how many lines are in the report, and the width in characters of the report. Focus now pauses and asks you to hit the return when you are ready for the report. After hitting the return, you will see the first page of the report.

FOCUS' report output facility, or Hot Screen, provides full-screen scrolling capabilities for reviewing the report contents. The entire report remains accessible until the return key is pressed after the 'END-OF-REPORT' message appears in the control area at the bottom of the screen. If the report is too wide to fit on the screen (more than 80 columns), you will see the left side of each page and then the right side. By successively hitting the return key, you will step down through the report. The following table summarizes other commands that can be entered while the report is on the screen. These should be typed on the command line at the bottom of the screen, followed by a return.

Hot Screen Command Line Commands

Command	Description
top	Scrolls to the first page
bottom	Scrolls to the last page
next n	Scrolls forward 'n' pages
forw n	Same as next n
down n	Same as next n
up n	Scrolls up or backwards 'n' pages
back n	Same as up n
left n	Moves screen display 'n' characters to the left
right n	Moves screen display 'n' characters to the right
locate/string	Locates the character string 'string'
quit	Leave the report
exit	Leave the report

The shortest unique truncation can be used for any of the above commands. Also, by repeating the first letter of the command, the command can be issued repeatedly by just hitting the return key. For example, 'uu 1' will scroll up 1 page each time the return key is hit.

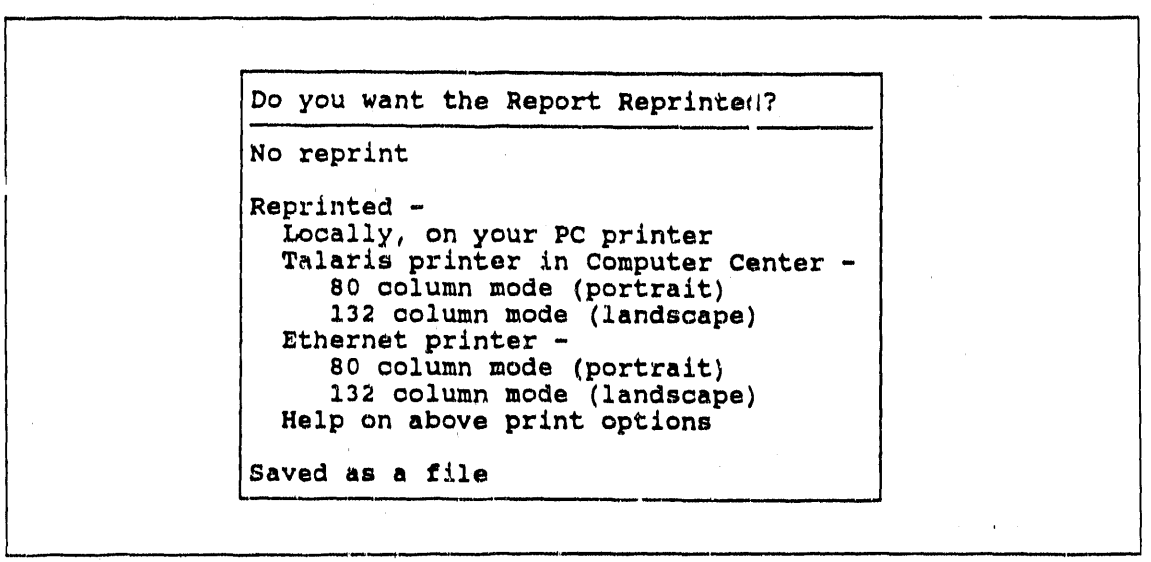
The above commands work best when you are using a VT100 terminal, or a VT200. On IBM-PCs and MACs with VT-100 emulators, they do not always work as well. In particular, although the 'locate' command seems to work as advertised, the repeat version or llocate/string does not appear to work on an IBM-

PC using Kermit as an emulator. Similarly, 'left n' and 'right n' appear to move from one panel to the other rather than just 'n' characters.

In summary, you may step through the report page-by-page by hitting successive carriage returns, or you may enter any of the above commands to see certain portions of the report. At any time, you may type 'q' or 'e' to quit or exit from the report. Also, when the message 'End-of-Report' appears at the bottom of the screen, you may hit return once more to exit the report. On exiting the report, a screen appears asking about hardcopy output. Please refer to the following section for more information about this screen. After selecting an option, you will be returned to the menu with which this report started.

III.B.2 Getting Hardcopy Output

After the user has finished looking at his report on the screen, a window appears listing hardcopy options. This menu is essentially self-explanatory. If the user does not want any hard copy output, he can just hit return, as the cursor will be positioned on the first entry 'No reprint'.



If the user does want to save the report, there are four options - 1) locally on an IBM-PC printer, 2) at the computer center printer, 3) on a printer on the laboratory network, or 4) in a disk file.

A) **Local Print-out -**
The ability to get a local print-out is possible *only* if you have logged onto the VAX through an IBM-PC and if you have a printer available locally. Depending upon the size of the report, you may have to have the printer in compressed mode. If you have logged on through a Macintosh, the option for local ouput is *not* available.

B) **Print-out at the Computer Center or on a Network Printer -**
The report can also be sent to one of the Talaris printers at the computer center, or to one of the printers on the laboratory-wide network, whichever is more convenient for the user. In either case, the

user has the option of printing the report lengthwise on the page (portrait mode) with a maximum of 80 columns per page, or across the page (landscape mode) with a maximum of 132 columns per page. If a report is wider than the indicated maximum, the report will be printed in panels, i.e., in landscape mode, the first panel contains the leftmost 132 columns, the second panel the next 132 columns, etc. For ease of readability, wide reports should probably be printed in landscape mode.

If one of these print options is chosen, the user will be asked to supply a name for the report. This name will identify the report and is particularly helpful if the user will be printing several reports. A typical name might be eff12.out for December effort or det3025.lst for a detail ledger report for the account 302501.

Any reports that you may have sent to the printer will still be in your directory after the Focus session. They will have the name(s) that you have indicated. If the reports have printed successfully, you should delete the files from your directory.

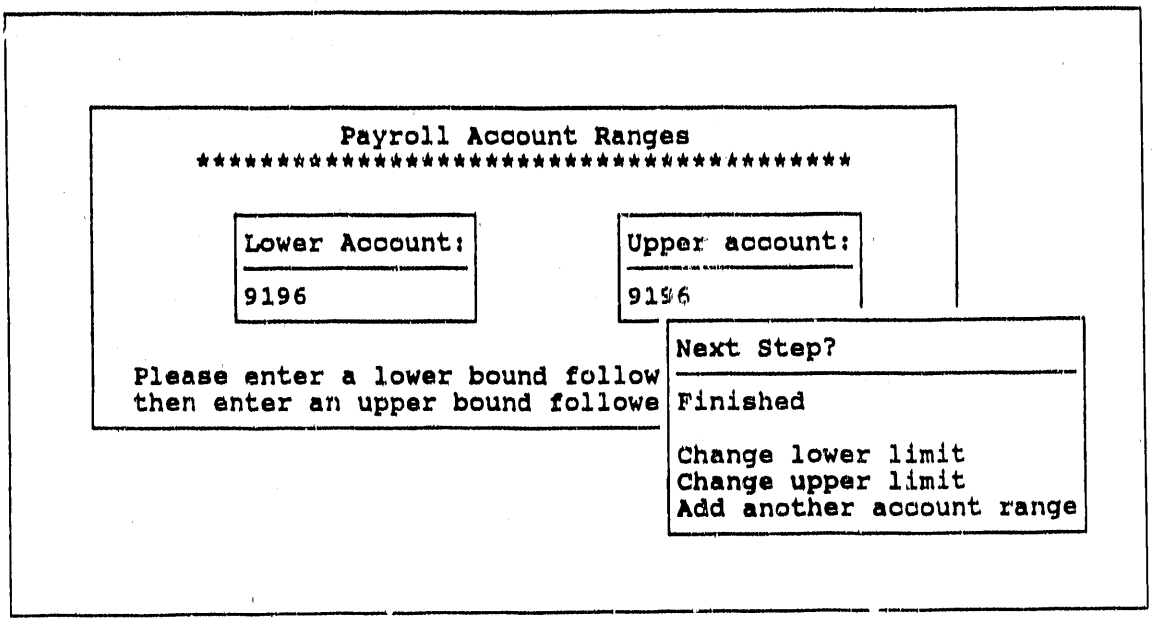
If the option to use one of the printers on the laboratory network is selected, Focus will look in the user's profile to see if he has named a printer. If one has been specified, the user will have the option of using this one or selecting another one. If none has been specified, the user will be asked to supply the name of one. For more information on the names of the printers available on the laboratory network, type 'help laserprint' at the Csa1> prompt.

C) Saved as a Disk File -
If the user chooses to save his report in a disk file, he will be asked to supply a name for the file. It will be saved with that name and in the directory in which he is running Focus.

When you have finished selecting a printout destination, you will be returned to the report generating menu from which the current report was generated. Then you will have the option to generate a report similar to the one just generated, or go to another portion of the Toolkit.

III.B.3 Entering Cost or Pay Account Ranges

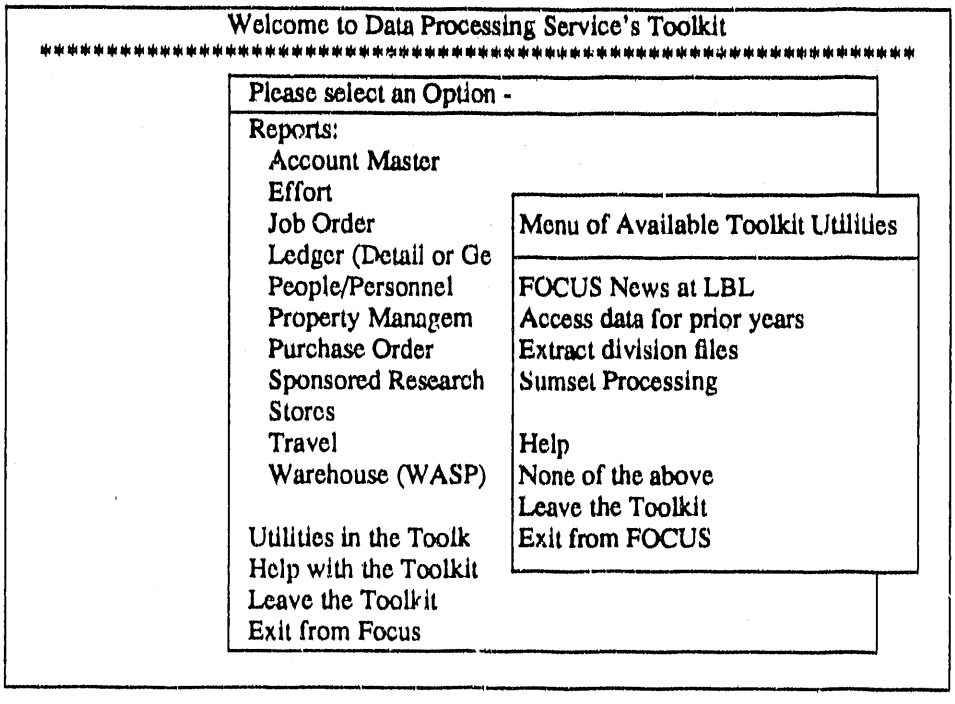
In many reports, the user is asked to enter a range or cost or pay accounts. The example will illustrate entering a payroll account range; the procedure for cost account ranges is very similar. A screen with two small windows appears asking the for the payroll accounts of interest. The user should enter a lower bound followed by a return, then an upper bound followed by a return. (The upper bound may be the same as the lower bound.) A small window then appears in the lower righthand corner of the screen. At that time, the user can indicate that he is finished, that he wants to correct one of his entries - either the lower limit or the upper limit, or that he wants to add another payroll account range. The following shows what the screen will look like after the user has entered the pay account ranges of 9196 to 9196.



After entering all the account range(s) of interest, the user should indicate that he is finished, and FOCUS will generate the requested report.

III.C Utilities

Section III.A covered the reports that are available within the Toolkit. This section covers utilities - Toolkit features to help with the use of existing files or the creation of new files. The following screen shows the utilities currently available.



III.C.1 FOCUS News at LBL

All new features as well as changes to existing features are documented in this section. If an important change or addition is made, a broadcast message is issued automatically by the user's typing of 'ex tkit'. This message will state the general topic of the change and ask the user to refer to the 'News' section for more details.

The news appears on the screen one page at a time with the most recent items appearing first. Hitting the return key enables you to page through one page at a time. At any time, you may type an 'x' to get out of this section and return to the general 'utilities' menu.

III.C.2 Access data for Prior Years

The summary effort file and the detail and general ledger files are available on-line for fiscal years 86 through 89. Within the Toolkit, it is possible to generate detail ledger (DET) reports for any month in FY89, and general ledger (EXP) reports for FY86 through FY89. Currently, no reports are available from the summary effort files for prior years.

If you want to be able to access one of these files to generate your own report, you must execute the utility 'Access data for prior years'. All prior years files as well as the file for the current fiscal year will then be made available under the names EFFORTnn, DETAILnn, and LEDGERnn for effort, detail ledger and general ledger respectively, where nn represents the fiscal year of interest - 86, 87, 88, 89, or 90.

III.C.3 Extract divisional files

This utility can create a subset of a laboratory-wide file containing only data for a specified division. This is particularly useful for those who run lots of their own reports on accounts within their division. By using a divisional file instead of the laboratory-wide file, the report should run much more quickly. This procedure will work with either of the ledger files, detail or general, and with the stores files, weekly or monthly.

On selecting this option in the utilities menu, the following menu appears. The user is asked first for the administrative file of interest - general ledger, detail ledger, monthly stores issues, or weekly stores issues - and then for the division.

```
**************************************************************************
                      Generation of Division Files                  TK4F

  Please select the database of interest by typing the indicated letter

              A       General Ledger (FGENLDGR)
              B       Detailed Ledger (DET.DAT)
              C       Monthly Stores Issues (MSI.DAT)
              D       Weekly  Stores Issues (WSI.DAT)

              N       None of the above, return to preceeding menu
              L       Leave the Toolkit, i.e., return to FOCUS
              E       Exit from FOCUS

  Enter choice     followed by return
  If you respond with A, B, C, or D, you will then be asked for the
  division of interest.

  NOTE - the extracted divisional file may be quite large (over 2,000
  blocks for the larger divisions). Be sure that you have the space.
```

NOTE - Not only does this procedure require a lot of time as each account in the laboratory-wide file much be checked against the account master to see if it is in the desired division, but the output file may need as much disk space as 2,000 blocks, depending upon the selected file and division.

III.C.4 SUMSET Processing

The term 'SUMSETS' describes a mechanism for grouping account numbers for reporting purposes. The SUMSETS facility within the Toolkit provides the tools necessary for defining these aggregations, maintaining them, and producing files that may be JOINed to any of the Toolkit data bases. At the present time, this option is still being developed. When this facility is finished, there will be help screens explaining in detail how this facility works - how to enter the data, how to maintain it, how to update it, and how to join it with other files.

IV. Helpful Hints

This section covers some useful commands on the VAX as well as some of the more common problems that can occur when trying to run FOCUS and/or the Toolkit.

IV.A. Useful VAX/Focus commands

This section is not meant to be a complete summary of VAX/VMS commands or of Focus commands, but a list some of the more common and useful ones. The first list contains the most useful VAX/VMS commands. These can be used at the VAX prompt, 'Csa1>' or within Focus at the Focus prompt by preceeding the command with 'VMS '. The Focus prompt is '>>' or 'VAX/FOCUS>'. The second list contains some useful Focus commands.

VAX/VMS Commands

Command;Description	
dir	Directory listing of all files
dir/size	Directory listing with size of files
dir/date	Directory listing with creation date of files
dir/prot	Directory listing with protection of files
delete <file.dat;n>	Delete the file <file.dat;n> (Be sure to include the version number)
purge <file.dat>	Delete all but newest version of <file.dat>
type <file.dat>	Display <file.dat> on the screen
focus	Start up Focus
lo	Log off the VAX computer

If you would like to know more on one of the above commands or on another VAX/VMS command, type 'help <command>' at the csa1 prompt for on-line help, e.g., 'help dir' will give on-line help with the dir command.

Focus Commands

Command	Description
ex tkit	Start up Toolkit II
fin	To leave Focus
? file <filename>	For information about the Focus file <filename> including when it was last updated
vms	to enter the VAX/VMS operating system (type 'lo' to return to Focus)
?f	Within a TABLE request, to get a list of all fieldnames in a file

As was stated above, any VAX/VMS command can be executed at the Focus prompt by typing 'VMS' before the VAX command. If you want to execute a series of VMS commands, it is easier to exit temporarily from Focus to the VMS command level instead of preceeding each command with 'VMS'. This is done by typing just 'VMS' followed by a return. After executing the various VAX commands, type 'lo' to return to Focus.

Not only does the command 'ex tkit' offer a menu of options for the user, but it also locates the administrative data files for Focus. When Focus is first started, it sees files in the Focus program directory and in the user's directory but nothing else. 'ex tkit' defines the directory paths (foc$dir1, foc$dir2, etc.) where the the laboratory administrative files and the computer code used by the Toolkit are located.

Focus commands can be entered interactively from the terminal one by one or can be stored in a file called a 'focexec'. Focus expects the file to have the suffix 'fex'. For example, a focexec to generate an effort report could be called effort.fex. The focexec can be executed anytime by typing 'ex effort' at the Focus prompt. When entering Focus commands at the Focus prompt, either lowercase or uppercase is fine. All commands in a focexec must be in uppercase, however.

I.B. Focus Profile

Focus provides the user with the ability to initialize variables and define overall environmental conditions at start-up time through a profile file. This file can be set up using the Focus editor TED or any other editor with which the user is familiar. The file must be called 'profile.fex' and must be located in the directory from which Focus is called. Through this file, the user can

1) establish standard conditions that apply throughout a working session,
2) provide a menu of subsequent user options, or
3) control an entire application.

The following is a sample profile.fex that prints on the screen the date and time at which the Focus session is started, defines an offline printer as ip2, the printer in the Computer Center, defines a screen width of 90 columns instead of the default 80, and starts up Toolkit II.

```
-* PROFILE.FEX
-SET &&LPT = 'IP2';
-TYPE   FOCUS Session started at &TOD on &DATE
-TYPE   Default printer is &&LPT
-TYPE
SET PANEL = 90
EX TKIT
```

I.C. Common FOCUS Problems

The error messages given by FOCUS are not always very helpful in isolating the real problem. If you are having some difficulties, scan through the following to see if you can find something similar to what you are experiencing. The following subsections mention some of the more common problems and their solutions.

IV.C.1. (FOC302) ERROR WRITING FOCEXEC TEMPORARY FILE

This is usually caused by a lack of disk space. The following is a typical example.

```
FOCUS  5.2.2   VX5.2.2 CREATED 08/29/89
(C)Copyright 1989 Information Builders Inc.

>>ex tkit

            The initialization process is taking place!!

%RMS-E-EXT, ACP file extend failed

 ERROR AT OR NEAR LINE  17  IN PROCEDURE IBI$FOCUS:TKIT.FEX

(FOC302) ERROR WRITING FOCEXEC TEMPORARY FILE
>>
```

To determine if you have enough disk space, type 'show quota' at the Csa1> prompt, or type 'vms show quota' at the Focus prompt, '>>'. The computer will respond with how many blocks you are authorized to use, how many you have used, and how many are still available.The amount of space required will depend upon what you intend to do in Focus; for most purposes, a few hundred blocks should be sufficient.

If you have little free space available, you must delete some files to free up some space, before running FOCUS. Do a directory listing to see what files you have in your directory. The files FOCSORT.FTM and FOCSTACK.FTM can be deleted as they are scratch files created in previous Focus runs. If there are multiple copies of some files, you may want to use the 'purge' command to delete all but the most current version.

IV.C.2 (FOC322) FILE DESCRIPTION DOES NOT MATCH DATA: NNNNN

This usually occurs when the user has in his own directory an old copy of the Master File Description for the Focus file NNNNN or an old copy of the FOCUS data file. In general, it is not a good practice to maintain your own version of a laboratory administrative file - either the master or the data file. If changes are made to the laboratory file, then your copy will no longer be compatible and causes problems.

If the above error occurs, do a directory listing to see what files are in your directory. If you see a file called NNNNN.MAS or NNNNN.FOC, it is probably the culprit. Unless you are sure that you need it, it should be deleted. If you want to keep it, give it another name that will not cause Focus problems, e.g., MYNNNNN.MAS.

-END-

DATE FILMED

11 / 02 / 90