

MIS Consultancy Trip Report

**Pakistan Child Survival Project
Islamabad, Pakistan**

**By Randy Wilson/MSH Boston
October 27, 1992**

BEST AVAILABLE DOCUMENT

MIS Consultancy Trip Report

**Pakistan Child Survival Project
Islamabad, Pakistan**

TABLE OF CONTENTS

Purpose of visit: 1

General Observations: 1

Specific Activities: 2

 a. **Updating of the Monthly Reporting module:** 2

 b. **Curriculum Development:** 2

 c. **Field Testing of Monthly Reports Software:** 3

 d. **Converting the HID for use on a network:** 4

 e. **Design of Quarterly and Yearly reports data file structures:** 4

 f. **Development of Reports Module for Field Office Accounting
 Package:** 5

Specific Follow-up Activities: 5

ANNEXES:

- I Updated Screen displays for Monthly Reports Module
- II On-line help text for Monthly Reports Module
- III Sample batch summary report
- IV Sample disease report
- V Session Outline for Monthly Reports Module training
- VI Feedback on Monthly Report Module field test
- VII Feedback from HID Implementation Review
- VIII Design of Quarterly and Yearly Reports file structure
- XI Documentation for Field Office Accounting reports module

Randy Wilson/MSH Boston
October 27, 1992

Trip Report: Pakistan Child Survival Project, Islamabad

Dates: 17 September-8 October 1992

1. **Purpose of visit:** This 2½ week visit was planned to further develop the computerized data processing system for Pakistan's Health Management Information System for First Level Care Facilities (HMIS/FLCF) and to develop a curriculum for specific computer training. Several factors, most notably the untimely demise of the project's chief of party the day before my arrival, altered somewhat the activities which I was able to accomplish. Key accomplishments included:
 - a. Updating the software for Monthly Reports data entry and processing.
 - b. Field testing the software for Monthly Reports and incorporating modifications identified during the field tests.
 - c. Developing a LAN version of the HMIS/FLCF for the federal computer center
 - d. Developing specifications for the Yearly and Quarterly district reports data entry and processing.
 - e. Developing curriculum for the specific computer training of the operators in the HMIS/FLCF application.

One element which was completely dropped from my scope of work concerned the work on the system's Geographic Information System (GIS) component. Sadly, this same item had to be stricken from my list of activities last time and for the same reasons -- the corruption of the geographic data files produced for the project by Tom Cassidy of HIID. (Since my return to Boston, these files have been revived, so we are likely to see more progress on the GIS front next visit.

2. **General Observations:** In spite of the very unfortunate timing of my visit, I was able to make considerable progress on a number of fronts. Much of this was due largely to the excellent groundwork that the HIS team has done to reach consensus on, field test and document the manual elements of the data collection system. This enabled me to get on with much of my work more or less independently, while the rest of the team was picking up the pieces after Duane Smith's death. Unfortunately, my efforts to take up as little of Theo's time as possible, meant that some strategic issues could not be dealt with until the last day of my visit -- leaving no time to incorporate them into my work.

The bulk of my time was spent finalizing and field testing the Monthly Reports data entry system, and this presented some very interesting technical challenges. Foremost among these were our efforts to conceal from end users what is in fact a fairly complex data structure. This resulted in a set of procedures which use SQL queries to fill 3 dimensional arrays in order to give the appearance that all data is being entered onto a single record.

The field trip to field test this system provided some very useful and positive feedback on the Monthly Reports module as well as on the Health Institutions Database (HID), which had been introduced earlier.

BEST AVAILABLE DOCUMENT

Generally speaking computerized systems development efforts are on track and on schedule, although more needs to be done on the preparation of users' documentation. I was impressed with the work that Shafat has done on the installation of computer equipment in data processing centers at various levels and the generic computer training seems to have been thorough. The idea of introducing the HID module first has appeared to have paid off, as the staff who we visited during field testing were busily making use of the data it contained and were comfortable with the user interface -- paving the way to a shorter learning curve for the more complex Monthly Reports system which shares the same user interface.

3. *Specific Activities:*

- a. **Updating of the Monthly Reporting module:** Considerable progress was made on this front, but it would be premature to say that it has been completely finalized. When I arrived, I started with the prototype system that was put together during the last visit and made the following changes:
- i. updated the file structure and screens to reflect changes incorporated into the Monthly Report form since the completion of field testing.
 - ii. modified the screens so that all data entry is done using memory variables and arrays, rather than editing the database files directly. This was done to protect the data against corruption due to possible power failures and to facilitate conversion of the system to a multi-user environment later on. Annex I contains the latest screen displays.
 - iii. built in the validation checks required to ensure the accuracy of the data.
 - iv. developed an on-line help system (Annex II).
 - v. updated the technical documentation to reflect changes incorporated into the system.
 - vi. made some improvements to the batch preparation system including a batch report form which can be printed out and sent to accompany diskettes (Annex III contains a sample batch report).
 - vii. prepared one sample feedback report on disease statistics -- the feedback reporting system will actually be developed during my next visit early in 1993 (Annex IV contains a sample of this report).

There remain a number of enhancements to be done.

- * optimizing the code which is used to fill the arrays with child records on diseases, stocks and vaccinations to gain speed -- this is primarily an issue with the slower notebook computers and '286 class machines which some provincial offices might want to use.
- * establishing a means for coding missing values
- * rigorously testing the data transmission/batch process.
- * improving the error messages which are displayed to data entry staff when they make invalid entries and producing an error list for each report once data entry is complete.

- b. **Curriculum Development:** My focus here was on curriculum for computer

operator training specifically related to the Monthly Reporting Module. I made considerable progress on developing this training curriculum by producing a detailed set of course objectives and a training outline (See Annex V). This still needs to be edited and put together as a complete trainer's guide in the standard PCSP format once the responsibility for training shifts from Shafat to master trainers within the districts. The topics covered in these sessions include all the steps in monthly reports processing, include managing the paper trail, manual checking of the forms, data entry, batch transmission and managing reports with errors. Ideas for practical exercises for trainees have been included in each major section of the outline. It is estimated that these training sessions will probably need to take about 2 days, although the exact split of time between the different sessions still needs to be determined.

- c. **Field Testing of Monthly Reports Software:** This 3-day excursion was planned to the North West Frontier Province because this region has made considerable progress in the use of the first computerized module of the HMIS, and because both the District and Divisional Health Offices in Saidu Sharif are computerized. We also spent a day at the Provincial Health office in Peshawar. The key objectives of these visits were to:
- i. test out the new data entry screens for the Monthly Reports and get end-user input into elements of the interface which we felt might cause them problems (e.g. the validation routines). Staff from each level were asked to enter a number of sample monthly reports and Shafat and I took notes on areas where improvements could be made. One of our key concerns was to minimize the amount of time required to enter each form, an effort which we estimate will take around 10 minutes once data entry staff become proficient. We were particularly please to see that most data entry staff remarked at how similar this module was to the HID and were quickly able to manipulate its menus and begin data entry. Detailed lists of our observations are included in Annex VI, and most of the modifications were made to the system during the course of the field test, so that by the time we got to the Provincial level, the system was fairly stable.
 - ii. Review implementation of the Health Institutions Database (HID): It was encouraging to see staff at the Saidu Sharif District Health Office busily extracting selected data from the HID as we arrived, more or less unannounced. They were making lists of all facilities under construction, so that the DHO could follow up on construction efforts. Most of our observations about the HID related to the Provincial Health Institutions Database, for which additional enhancements were requested (See Shafat's notes on this in Annex VII). Data entry clerks seemed to be fairly confident with the data entry work although they have not tended to be proactive enough in terms of advising the DHOs and other managers of the types of reports that they can provide and the range of queries to which

they can respond. A key recommendation coming out of this visit is that the user manuals should include sample print-outs which can be shown to managers to get them more familiar with the system's outputs. Of note is that a number of the formulae in the some of the summary report forms were incorrect, something that only became apparent once we had real and complete data entered about all types of facilities.

- d. **Converting the HID for use on a network:** Since the project does not have a network version of Foxpro, this effort was limited to converting one module for shared access over a network. This turned out to be a reasonably simple conversion, involving the following steps:
- i. All screen sets were modified to get user input into memory variables instead of database fields (e.g. institut.inst_id became m.inst_id)
 - ii. The environment setting SET EXCLUSIVE OFF was included in the initial startup program to permit files to be shared.
 - iii. The SCATTER MEMVAR command was issued before each data entry screen is drawn.
 - iv. The record was locked and the GATHER MEMVAR command was issued before any action which would change the current record number in the Institut file. The lock was the released once the gather process was complete.
 - v. The file was locked before each APPEND BLANK, DELETE, REINDEX and PACK command.

Unfortunately, I was unable to test the software except in single user mode. This will be done back in Boston. Once tests are complete, it should be relatively easy for Shafat to make the corresponding changes to any of the modules that are designed. It will be important to order a 6-pack of Foxpro/LAN for PCSP or the Biostatistics cell as part of the computer network equipment that I recommended during my last visit (see my trip report of June 25, 1992).

- e. **Design of Quarterly and Yearly reports data file structures:** Based upon the proposed Quarterly and Yearly report formats, I produced detailed file structures and did and estimate of file sizes for the Yearly report. There remains a certain amount of uncertainty over the extent to which the Quarterly reports will be computerized as some of the data it includes is actually summary information which can later be generated from the Monthly Reporting and HID modules without having to be re-entered. The data entity diagram which shows the relationships between the key files in the different modules is attached in Annex VIII along with a detailed file structure table and file size estimates. Because Yearly reports are submitted only once a year from each health facility, the total file size for all of Pakistan's facilities will remain relatively manageable at less than 40 megabytes. Of particular note here is the relationship between the ANNULRPT file and the INSTITUT file. There is a certain amount of duplication of data between the two files, as the yearly reports data is used to

update information on facility infrastructure in the INSTITUT file. The same field names and field sizes are used for these fields to facilitate this automatic update process.

- f. **Development of Reports Module for Field Office Accounting Package:** This extra item was taken on partly to help provide the finance office with more flexibility in reporting on sub-sets of data for clearing up outstanding advances for Duane Smith. While I was at it, I produced a generic query system and most of the system's standard reports so that they could be printed using a user-specified data set and so that users could create their own queries and browse the records that matched in read-only mode. Basic documentation for this executable system are included in Annex XI.

4. *Specific Follow-up Activities:*

- a. Contact FoxPro and Theo's old colleague from Chad, John Barton to see how they treated missing values in the Chadian HIS. Plan to build in these features during next visit.
- b. Return Atlas Graphics disk with Pakistan geographic file to Tom Cassidy to see if he can resurrect it. If he succeeds, expedite the new files out to Pakistan.
- c. Plan for next visit to Pakistan with the following general scope of work:
- i. Review training materials for the HMIS computer operator's training sessions and prepare master trainer's book.
 - ii. Develop feedback reports for Monthly Report database
 - iii. Develop procedure to create selected data sets for use by other Departments and Programs in the Ministry (e.g. EPI, TB control, Family Planning)
 - iv. Finalize the users manuals for each of the computerized modules which are complete.
 - v. Monitor the implementation of the HMIS Modules
 - vi. Move forward with GIS implementation
- d. Plan for a second visit to Pakistan around May to evaluate system implementation and assist with turnover of the system to Basic Statistics cell staff.
- e. Shafat should make modifications to the HID as identified during the field test and work to complete the HID user manual, including sample report output. The updated installation and user manual should then be distributed to all data processing centers.
- f. Shafat should work on the Monthly Reports Module user manual based on the HID manual, the training curriculum and the system docs included in my last trip report.

System File Edit Record Window

Data Entry Help... F1
Calculator
Quit

MONTHLY RPT.

THANKS FOR TRYING
GRABBER™
 800 242-4PSL

System File Edit Record Window

Monthly Report 1

Inst. Id: 210001 Month: 06 Year: 92 Report Id: 2100019206

<p>1. INSTITUTION IDENTIFICATION</p> <p>Institution Name: DIRECTOR HEALTH SERVICES, HYDERABAED</p> <p>Incharge name: DR.M.SHARIF BALOCH</p>	<p>2. POPULATION DATA</p> <table style="width: 100%;"> <tr> <td>Catchment area Pop.</td> <td style="border: 1px solid black; text-align: center;">34700</td> </tr> <tr> <td>Expected births:</td> <td style="border: 1px solid black; text-align: center;">115</td> </tr> <tr> <td>No. Births registered:</td> <td style="text-align: right;">20 17%</td> </tr> <tr> <td>No. Newborns weighed:</td> <td style="text-align: right;">12 60%</td> </tr> <tr> <td>No. with low birth wt.:</td> <td style="text-align: right;">1 8%</td> </tr> </table>	Catchment area Pop.	34700	Expected births:	115	No. Births registered:	20 17%	No. Newborns weighed:	12 60%	No. with low birth wt.:	1 8%						
Catchment area Pop.	34700																
Expected births:	115																
No. Births registered:	20 17%																
No. Newborns weighed:	12 60%																
No. with low birth wt.:	1 8%																
<p>3. MEETINGS / HEALTH EDUCATION SESSIONS / HOME VISIT</p> <table style="width: 100%;"> <tr> <td style="width: 40%;">A. Staff mtngs held</td> <td style="border: 1px solid black; text-align: center;">2</td> <td style="width: 20%;">C. H.Ed.Sessions in inst.</td> <td style="border: 1px solid black; text-align: center;">0</td> </tr> <tr> <td>B. Meetings with TBAs</td> <td style="border: 1px solid black; text-align: center;">0</td> <td style="padding-left: 20px;">in schools</td> <td style="border: 1px solid black; text-align: center;">0</td> </tr> <tr> <td style="padding-left: 20px;">with CHWs</td> <td style="border: 1px solid black; text-align: center;">0</td> <td style="padding-left: 20px;">in community</td> <td style="border: 1px solid black; text-align: center;">0</td> </tr> <tr> <td style="padding-left: 20px;">with HC or CL</td> <td style="border: 1px solid black; text-align: center;">0</td> <td>D. Home visits by fac.personnel</td> <td style="border: 1px solid black; text-align: center;">0</td> </tr> </table>		A. Staff mtngs held	2	C. H.Ed.Sessions in inst.	0	B. Meetings with TBAs	0	in schools	0	with CHWs	0	in community	0	with HC or CL	0	D. Home visits by fac.personnel	0
A. Staff mtngs held	2	C. H.Ed.Sessions in inst.	0														
B. Meetings with TBAs	0	in schools	0														
with CHWs	0	in community	0														
with HC or CL	0	D. Home visits by fac.personnel	0														

Screen 1

F2=4Scr
< Find > < Next > < Prev > < Add > < Quit >

THANKS FOR TRYING
GRABBER™
 800 242-4PSL

System File Edit Record Window
Monthly Report - 2
Report Id: 2100019206

5. ESSENTIAL DRUGS / VACCINES / SUPPLIES

Items	Unit	Recd	For Care	Disc.	Clos. Balance	Day Out Stk	Other Drugs/Supplies	Unit	Day Out Stk
A. BCG Vacc	dos	2222	5	3	3	3	M. ORS	pkt	3
B. DPT Vacc	dos	23	3	3	3	3	N. Cotri.	tab	0
C. Polio Vacc	dos	3	3	0	0	0	O. Cotri.syp	bot	2
D. TT Vacc	dos	3	0	0	0	0	P. Choloquin	tab	0
E. Meas.Vacc	dos	23	0	0	0	0	Q. Primaquin	tab	0
F. DT Vacc	dos	3	3	3	3	3	R. Iron Tab.	tab	2
G. Syringes	pce	3	3	34	3	3	S. Folate Tab	tab	0
H. Needles	pce	3	3	3	3	3	T. Streptom.	val	3
I. Oral Cont.	cyl	3	3	3	3	3	U. Isoniazid	tab	0
J. Condoms	cyl	3	3	3	3	22	V. INH+Tb1	tab	3
K. Inj.Cont.	dos	3	3	3	3	3	W. Ziehl-Niel	bot	2
L. IUDs	pce	3	3	3	3	0			

Screen 2

F2=↓Scrn < Find > < Next > < Prev > < Add > < Quit >

THANKS FOR TRYING
GRABBER
800 242-4PSL

System File Edit Record Window
Monthly Report - 3
Report Id: 2100019206

7. CURATIVE CARE (y/n)? Y

A. New Cases (all diseases by Age Group)

	< 1	1-4	5-14	15-44	44+	Total
1. Male	45	33	43	96	39	256
2. Female	54	183	43	68	24	372
3. Total New Cases	99	216	86	164	63	0

4. Old Cases 1123

5. Total Visits. 1751

6. Cases Referred. 48

7. Feedback from Cases Referred. 0

8. % Referred of Total New Cases 7.6 %

9. % Feedback on Referred Cases. 0.0 %

Screen 3

F2=↓Scrn < Find > < Next > < Prev > < Add > < Quit >

THANKS FOR TRYING
GRABBER
800 242-4PSL

System File Edit Record Window
Monthly Report - 4

Report Id: 2100010692

B. HEALTH PROBLEMS

Code	Health Problem	Under 1	1 to 4	5 & over	TOTAL	%
101.	Diarrhoea	44	44	4	92	14.6
102.	Dysentery	4	4	4	12	1.9
103.	ARI	0	33	3	36	5.7
104.	Fever	3	3	3	9	1.4
105.	Cough >2 wks	3	3	3	9	1.4
106.	Suspected Cholera	3	3	3	9	1.4
107.	Susp. M. Meningitis	3	3	3	9	1.4
108.	Poliomyelitis	12	44	0	56	8.9
109.	Measles	0	0	0	0	0.0
110.	Neonatal Tetanus	0	0	0	0	0.0
111.	Diphtheria	0	0	0	0	0.0
112.	Whooping Cough	0	0	0	0	0.0
113.	Goiter	0	0	0	0	0.0
114.	Susp. U.Hepatitis	0	0	0	0	0.0
115.	Suspected AIDS	0	0	0	0	0.0
116.	Snake Bite	0	0	0	0	0.0
117.	Dog Bite	0	0	0	0	0.0
118.	Scabies	0	0	0	0	0.0
T o t a l :		72	137	23	92	

Screen 4

F2=↓Scrn < Find > < Next > < Prev > < Add > < Quit >

THANKS FOR TRYING
GRABBER™
 800 242-4PSL

System File Edit Record Window
Monthly Report 5

Report Id: 2100010692

C. DIARRHOEA (<5 yrs)

	Dehydration Status				Total
	None	Some	Severe	Unknown	
	12 13%	30 34%	20 22%	26 29%	88

D. DYSENTERY

	None	Some	Severe	Unknown	Total
	4 50%	2 25%	1 12%	1 12%	8

E. ARI

	ARI Disease Status				Total
	No Pneum.	Pneum.	Sev. Pneum.	U.S. Disease	
	12 36%	8 24%	8 24%	3 9%	33

F. MALARIA

	Blood Slides			Total
	B.S. in Fac.	Sent Out	Not tak.	
	7 77%	1 11%	1 11%	9

Lab Available (Y/N?) Y

	Internal	External
Slides Examined	104	23
Malaria Parasite Positive	36 34%	5 21%
P. Falciparum Positive	8 7%	1 4%

Screen 5

F2=↓Scrn < Find > < Next > < Prev > < Add > < Quit >

THANKS FOR TRYING
GRABBER™
 800 242-4PSL

System File Edit Record Window			
Monthly Report 6			Report Id: 2100019206
G. TUBERCULOSIS			
	Sputum Smears Requested		
	Exam. in Fac.	Pat. Referred	Total
105. Cases of cough >2 wks	6 66%	3 66%	9
	Internal	External	
1. Sputum Smear Series Done	12	12	
2. Smear Series ABF Positive	5 41% Pos.	5 41% Pos.	
TB Treatment (y/n) Y			
1. Patient Under Rx. at end of previous month			12
2. Started Rx:	a. No. started treatment	3	
	b. No. of New Cases	1 33%	
3. Stopped Rx:	c. No. discharged	3	
	d. No. Lost as defaulter	2 66%	
4. Patient under Rx. at end of this month			12
Screen 6			
F2=↓Scrn < Find > < Next > < Prev > < Add > < Quit > <div style="float: right; border: 1px solid black; padding: 2px;"> THANKS FOR TRYING GRABBER 800 242-4PSL </div>			

System File Edit Record Window			
Monthly Report 7			Report Id: 2100010692
H. IMMUNIZABLE CHILDHOOD DISEASES			
	Vaccination Status		
	Not Uac.	Partial	Fully Unknown
	Total	% Fully Vaccinated	
108. Poliomyelitis	12	0	0 44 56 0%
109. Measles	0	0	0 0 0 0%
110. Neonatal Tetanus	0	0	0 0 0 0%
111. Diphtheria	0	0	0 0 0 0%
112. Whooping Cough	0	0	0 0 0 0%
I. DISTRIBUTION OF IODINE (Y/N)? Y		J. MALNUTRITION	
	Clients	% of Number Total	
1. Under 20 years	55	1. Total weighed 24	
2. Pregnant women	6 Total	2. Normal 12 50%	
3. CBA women	7 Caps	3. Moderate Malnutrition 12 50%	
4. Total Clients	68 68	4. Severe Malnutrition 0 0%	
Screen 7			
F2=↓Scrn < Find > < Next > < Prev > < Add > < Quit > <div style="float: right; border: 1px solid black; padding: 2px;"> THANKS FOR TRYING GRABBER 800 242-4PSL </div>			

BEST AVAILABLE DOCUMENT

9

System File Edit Record Window
 Monthly Report 8
 MOTHER & CHILD CARE PREVENTIVE ACTIVITIES Report Id: 2100010692

A. PRENATAL CARE (Y/N)? Y Expected pregnancies: 128

New Regist.(NR)	35	NR 1st trimest.	28	Hgbl.< 10	12	Total visits	65
% of Expect.	27	% of NR	57	% of NR	34	Revisits	38

B. DELIVERIES (Y/N)? Y

Total	12	Trnd.Pers.	2	% expected	1
Stillbirths	0	In Fac.	2	% Del.Trnd	100
Abortions	0				

C. POST-NATAL CARE (Y/N)? Y

Total EMD 1 month ago	34
Rcd. 1+ PN visit	5
% of EMD 1 month ago	14 %

D. MATERNAL DEATHS 2

Screen 8

F2=↓Scr < Find > < Next > < Prev > < Add > < Quit >

THANKS FOR TRYING
GRABBER™
 800 242-4PSL

System File Edit Record Window
 Monthly Report 9
 Report Id: 2100010692

E. FAMILY PLANNING (Y/N)? Y

Total	New		Old	Visits by Contraceptive Method					Refer-		
Visits	Male	Fem.	Cases	Cases	Condom	Foam	Pill	Inj.	IUCD	Surg.	red
14	12	2	2	12	22	2	2	2	2	0	0
			Units Distributed		22	2	2	2	2		

F. GROWTH MONITORING (Y/N)? Y Expected Children < 1 year: 108

Newly Registered < 1 yr.	12	Total Visits	24	Number % of
% of expected < 1 yr.	11%	Normal Nutrition Status	20	Total
			80	83%

G. VACCINATIONS (Y/N)? Y Vaccination CA Population: 0

No. Fixed Centres: 1 No. Outreach Centres: 0 No. Mobile Units: 0

Screen 9

F2=↓Scr < Find > < Next > < Prev > < Add > < Quit >

THANKS FOR TRYING
GRABBER™
 800 242-4PSL

System File Edit Record Window

Monthly Report 10

Report Id: 2100019206

UACCINATIONS (contd..)

Vaccine Type	0-11 mo.	12-23 mo.	2 yrs. & over	TOTAL	
1. BCG	23	3	3	29	
2. DPT-1	23	55		81	
3. DPT-2	23	3		29	
4. DPT-3	0	0		33	
5. DPT-Booster		0		33	
6. OPU-Zero	0			33	
7. OPU-1	0	33	0	33	
8. OPU-2	0	33	0	33	
9. OPU-3	0	33	0	33	
10. OPU-Booster		0	0	0	
11. DT-1	0	0	0	0	
12. DT-2	0	0	0	0	
13. DT-Booster		0	3	3	
14. Measles	0	0	3	3	
15. Fully Immunized	0	0	3	3	
Target Group for TT	TT-I	TT-II	TT-III	TT-IV	TT-V
16. Pregnant Women	5	5	5	5	5
17. CBA Women	5	5	5	5	5
18. Total	10	10	10	10	10

Screen 10

F2=↓Scrn < Find > < Next > < Prev > < Add > < Quit >

THANKS FOR TRYING GRABBER 800.242.4PSL

System File Edit Record Window

Printer Setup...

Batch Processing

Prepare new batch
Error Report
Recreate old batch
Add data from batch

MONTHLY RPT.

THANKS FOR TRYING GRABBER 800.242.4PSL

ANNEX II

On-line Help Text from Monthly Report Module

Help Topic	Page
Monthly Reports	1
Adding Monthly Reports	1
Calculator	2
Manual Processing	2
Control Panel	3
Find	4
Batch Transmissions	4
Menu System	5
Monthly Reports: General Help	6
Report Dialog	7
Editing Report Data	7
Printing Reports	8
Expression Builder	8
Printer Driver Setup	9
Deleting a Record	10

Monthly Reports

The Monthly Reports module allows you to enter and edit data from the Monthly Reports from First level care facilities.

Information from each report is displayed in a series of 10 screens or "Windows". A control panel at the bottom of the screen allows you to move through the database or bring forward a dialog to locate records that meet specified criteria.

Moving Through the Database

In the "Control Panel," choose Up, Down, Top or Bottom to move through the database. Choose the Find push button to locate records from an abbreviated list of Institutions.

Editing Data

To edit a record in any of the Monthly Report windows, position the cursor on a field and enter the desired changes. To edit data in a different window, move to the desired window by pressing <PgUp> or <PgDn> until the appropriate window is activated.

Adding a New Record

Choose the Add push button to add a new record. An empty Monthly Report window is displayed and the cursor moves to the first field.

Menu System

The Monthly Reports module uses the standard menu system used for most Foxpro modules. For more information, see the Menu System topic in online Help.

Deleting a Record

With the desired Institution displayed on the screen, press <Alt> and then select the Delete record option from the Records pull down menu. The word <Deleted> will appear at the top corner of the screen. If you delete a record by mistake, select the Recall deleted record option from the same menu option.

See Also: Monthly Report: General Help, Control Panel, Find, Menu System, Report Dialog

Adding Monthly Reports

You can add new Institutions to the system by selecting the Add option from the control panel when any Monthly Reports screen is displayed on the screen.

Three bits of data are required to create a new record:

Inst. Id: Type the number code for the Institution for which a

report is being entered. If the Id. is not know or incorrect, the Institution Id finder will appear on your screen and you can select from the list of codes. If you still cannot find the correct code, and suspect that it is a new institution, you must quit the Monthly Reports module and first enter the new institution details through the Health Institutions Database module.

Report Month: Enter the month number (between 1 and 12).

Report Year: Enter the last to digits of the report year (e.g. 92).

Once these fields are entered, the system will check to ensure that there are no duplicate records already entered and then create a new records.

All boxes in the Monthly Report form which are highlighted by thick lines should be entered on the system.

See Also: Monthly Report: General Help, Deleting Records

Calculator

When you choose Calculator from the System menu popup, the Calculator desk accessory appears. This calculator is used like a standard pocket calculator.

Calculations can be performed using the keyboard or the mouse.

With the keyboard, you can type the equation as it would be written. Most Calculator keys have the same keyboard equivalents, with the following exceptions:

Key	Equivalent
Q	√
R	MR
N	±
A	M+
Z	MC
S	M-

Manual Processing

- A. Collect all incoming forms in a folder or bin for processing
- B. Check forms for completeness.

1. The following data is required before beginning to enter records:
 - a. The Institution ID No. (Check the HID database or a recently updated listing for facilities in your area for matching facilities before rejecting such a form).
 - b. The report month and year.
 - c. Most of the boxes surrounded with thick lines on the form should be filled in or crossed out and marked as N/A (not applicable).
 2. If any of these conditions apply, forms should be returned to the issuing facilities for correction before data entry.
- C. Collect the acceptable forms in a folder to be entered into the computer.

Control Panel

The control panel is a utility screen that is used throughout the HMIS/FLCF applications.

The push buttons in this window perform some of the following actions:

Find Brings forward the find dialog allowing you to move directly to a specific record.

Up Positions the pointer on the next record.

Down Positions the pointer on the previous record.

Top Positions the pointer on the first record.

Bottom Positions the pointer on the last record.

Add Adds a new record (or item line, if the Items window is selected).

Quit This clears control panel and the data editing screen that you are currently working on and returns control to the pull down menu. You will need to do this before running reports or doing other database maintenance functions.

To perform one of these actions, activate the control panel by pressing <F3> until one of the push buttons is highlighted. Then press the highlighted letter for the desired option or move to the option with your arrow keys and press <Enter>.

Mouse users can simply click on the desired push button to activate it.

See Also: Monthly Report: General Help, Browser, Menu System

Find

The Find push button displays a scrolling list of all records which can be edited in the current screen.

Move through the list using the mouse and the scroll bar on the right or by using the Home, End, PgUp, PgDn or cursor keys.

In addition, you can quickly move to a particular record by quickly typing the first numbers of the Institution Id. In this manner, typing 36 will take you to the first report that begins with a 36.

When you have highlighted the record you would like to edit, press Enter or double click the mouse button and the Finder window will disappear leaving you in the editing window on the record you have selected.

See Also: Monthly Report: General Help

Batch Transmissions

Once a month, District, Division and Province level Computer centres are supposed to prepare a batch of new and updated records to forward to a higher level. The following outlines the steps required to create such a batch automatically using the monthly reporting system:

1. Make sure the data entry screens are not displayed on your screen and select the Batch processing option from the File menu.
2. Select create batch to create a batch of all the new or modified files.
3. The batch files will automatically be created in the \batches sub-directory.
4. Print out a batch report.
5. If batch data will not fit on one floppy disk, use PKZIP or ZIPIT to compress the files.
6. Print out the batch report by selecting the Batch report menu option.
7. Copy these files to a floppy disk to transfer to the next level. You should also keep a copy of this batch in your office until the next level has received and successfully loaded the new data.
8. Forward the batch on to the next higher authority, noting the date sent on a transmission log.

See Also: Monthly Report: General Help, Control Panel

Menu System

A common menu system is displayed with most modules of the Health Institutions Database including the Monthly reports system. Occasionally, pads that correspond to a particular module are appended to this menu system. Many options in this menu system have control key shortcuts.

The common menu system contains the following pads and options:

System Menu

This menu contains options allowing you to access help and activate desk accessories.

Data Entry	Loads the institutions Data entry screens.
Help	Brings forward the Help window.
Calculator	Brings forward the calculator.
Quit	This options quits from the Monthly reports module.

Records

Delete This menu allows you to delete the record which is currently being displayed on the editing screen. Do delete records from a browse window press ^T.

Recall This permits you to recall records which have accidentally been marked for deletion (you will see a <Deleted> mark on the upper right hand corner of the screen). To recall a record in a browse window press ^T.

Reports Menu

This menu contains options allowing you to run reports.

Utility Menu

This menu contains a several file management utilities and is used to quit the Health Institutions Database.

Pack This permanently removes records which have been marked for deletion.

ReIndex Sometimes index files can become damaged during power outages or operator errors. This option reindexes all files.

Back-up This calls PKZIP, a file compression program, which automatically compresses all the data files into a single back-up file which should be copied onto disks on a regular basis. This same utility is used when you quit the Purchase Order System.

Printer setup This calls the Printer Driver Dialogue which enables you to configure the software for your printer.

See Also: Monthly Report: General Help, Calculator, Find, Report Dialog, Control Panel, Deleting Records, Printer Driver Setup

Monthly Reports: General Help

The Monthly Reports module is the data entry and batch transmission system for the Monthly Reports from First Level Care Health Institutions. It ties directly to the Health Institutions Database which store data on all health facilities in Pakistan.

It features the following main menu options:

System: This enables you to select which module of the HID you wish to work in.

Data Entry: lets you add and update information about each Monthly Report which is received.

Record: **Delete:** lets you delete a record which has been entered. This should be used on very rare instances, such as when you enter an incorrect date or institution id when first adding a new report. Most other changes can be better managed by simply editing the existing record.

Recall: Recalls deleted records

Flag as Error: Allows the data entry staff to flag a record as having an error.

Clear error flag: Clears error flags set on records.

Reports: This menu option lets you select one of several formats in which your data can be printed.

Utilities: Provides a set of utilities for maintaining the Application's data and Environment. These include:

Pack: Removes records marked for deletion

Reindex: Recreates the index files used to display records in the appropriate order. This is normally only done if the power has been shut off accidentally or you suspect that the index files have been corrupted.

Printer Setup: Allows you to set up and select the appropriate printer driver for your installed printer.

See Also: Calculator, Calendar/Diary, Find, Report Dialog, Control Panel, Deleting Records, Printer Driver Setup, Menu System

Report Dialog

This dialog allows you to select the destination of your report and the order in which your records will print.

Output

The radio check boxes allow you to specify where to output the report and perform the following actions:

Preview Displays the report in a page preview window on the monitor.

To File Brings forward a dialog in which you can specify the name and location of a text file.

To Print Directs output to the current printer.

When the desired options are selected, choose OK to run the report.

See Also: Monthly Report: General Help, Printing Reports

Editing Report Data

- A. Load the Monthly Reports module.
- B. Select Data Entry
- C. Activate the Control Panel by pressing <F3>
- D. Find the record you want by moving through the database using the <Next>, <Previous>, <Top> or <Bottom> options in the control panel, or by selecting <Find>. This will present you with a scrolling list from which you can quickly find the report you want to edit. Press the first number of the institution id to move quickly to the first report in that province. Use the <up>, <down>, <pgdn>, <home> and <end> keys to move quickly around this list. Press enter when you have found the report you want to edit. This will display the record for that report.
- E. Move to the fields you want to modify by using the pgup and pgdn keys to find the screen that contains the data that needs modification. Then use the up and down arrow keys to move to the field that needs changing.
- F. Make any other changes you need and then quit or move to another report for editing.
- G. Write on the report form your name and the date you edited the database record.
- H. When you have finished editing the report, write file it with the other completed reports.

See Also: Monthly Report: General Help, Find, Menu System

ANNEX III: Sample batch report.

This batch was produced on 14/10/1992
and has been marked as batch no 210002001
It was prepared by the DISTRICT HEALTH OFFICE, HYDERABAD
and consists of the following new or changed records:

Institution records:	2983
Monthly reports:	4
Disease records:	24
Stock records:	39
Vaccination records:	20

The proportion of institutions included in this batch
was: 4 out of a potential 2983 or 0%

BEST AVAILABLE DOCUMENT

HMIS/FLCF Reporting System
 Monthly Reports Disease Statistics

Reporting Period: Month 12
 Year 92

Facility ID	Name	Type	No of Beds	Catch Pop.	Total Cases Old	New
70007	RURAL HEALTH CENTER	RHC	4	18000	200	781

Disease	No of cases by age group			Total	Percent of New Cases
	Under 1	1-4	5-45		
01. Diarrhoea	102	49	7	158	20.23 %
02. Dysentery	1	0	5	6	0.77 %
03. Acute Respiratory Infection	1	0	0	1	0.13 %
04. Fever (Clinical Malaria)	0	0	75	75	9.60 %
05. Cough > 2 weeks	3	5	4	12	1.54 %
07. Meningococcal Meningitis	2	6	0	8	1.02 %
10. Neonatal Tetanus	11	0	0	11	1.41 %
14. Viral Hepatitis	0	2	39	41	5.25 %
16. Snake bite w/poisoning	1	0	1	2	0.26 %

Total Priority diseases: 314

HMIS Specific Computer Training
Session Outline For HMIS/Monthly Reports Module
September 28, 1992

Session Objectives: 1

Session Outline 2

- 1. Introduction to the Monthly Reports Module: 2
- 2. Pre-Entry Manual Procedures: 2
- 3. Data entry: 2
- 4. Editing a record: 3
- 5. Data transmission: 3
- 6. Troubleshooting and Configuring your PC to run this program: 4
- 7. Data maintenance: 4

HMIS Specific Computer Training
Session Outline For HMIS/Monthly Reports Module
September 28, 1992

Session Objectives: By the end of the training session, computer operators at each level of the health services should be able to:

1. Complete the manual procedures required to prepare monthly report forms for data entry.
2. Load the Monthly Reports Module and enter complete monthly report records and correctly identify what to do in the face of the following eventualities:
 - a. The Institution ID is missing from the report form.
 - b. A report has come in from a new facility without an Institution ID.
 - c. The report contains invalid data.
3. Find and edit a previously input monthly reports with data which has been corrected by the Institution concerned and returned.
4. Correctly complete all of the data maintenance functions which the system requires, including packing, reindexing and backing up the data and program files.
5. Prepare batches of data to be used to transmit new data to the next level within the ministry.
6. For those Operators who will be receiving data from lower levels, complete the process required to update the data on their systems from diskettes containing transmitted data.
7. Configure their micro computers to optimize the performance of the data entry software and do basic troubleshooting when problems occur.

BEST AVAILABLE DOCUMENT

Session Outline

1. Introduction to the Monthly Reports Module:
 - a. Relationship to other modules in the system, particularly the HID. (use data diagram)
 - b. Module purpose: Data entry and Maintenance for Monthly Report forms. Designed to ensure the integrity of the data at all levels within the health services.
 - c. Design of module: DEMONSTRATION
 - i. Pull down menus
 - ii. Control Panel
 - iii. Multiple screens which permit you to move back and forth through the 10 screens with the page up page down keys. Screens are designed to correspond to the sequence of fields in the report form.
 - iv. Special keys:
 - (1) F1=Help
 - (2) F2 or <PgUp>, <PgDn>=Cycle between screens
 - (3) F3=Activate the control panel
 - v. Pop up windows to display correct options when invalid data is entered.
2. Pre-Entry Manual Procedures:
 - a. Show flow chart of forms transmission and timing
 - b. Collect all incoming forms in a folder or bin for processing
 - c. Check forms for completeness.
 - i. The following data is required before beginning to enter records:
 - (1) The Institution ID No. (Check the HID database or a recently updated listing for facilities in your area for matching facilities before rejecting such a form).
 - (2) The report month and year.
 - (3) Most of the boxes surrounded with thick lines on the form should be filled in or crossed out and marked as N/A (not applicable).
 - ii. If any of these conditions apply, forms should be returned to the issuing facilities for correction before data entry.
 - d. Collect the acceptable forms in a folder to be entered into the computer.
EXERCISE: Process sample forms for data entry, identifying errors and deciding upon how they should be treated.
3. Data entry:
 - a. Load the Monthly Reports module.
 - b. Select Data Entry from the System Data entry Menu.
 - c. When the software is first loaded, the first report on the system is displayed. If you want to add a record, press <F3> to activate the Control Panel at the bottom of the screen and press A for < Add >.
 - d. Enter data beginning on the first page and continuing through the last

- e. When you have finished entering all the data the cursor will appear on the control panel again and you can add another record or quit.
- f. After each report entered, you should write on the report form your name and the date that the data was entered.
- g. When you have finished entering a batch of report forms, file them with the other reports for which data entry is complete.

EXERCISE: Enter new report forms which contain the following traps: missing Institute Id #, a new Institution without an ID #, total have been incorrectly calculated in the paper report.

4. Editing a record:

- a. Load the Monthly Reports module.
- b. Select Data Entry
- c. Activate the Control Panel by pressing <F3>
- d. Find the record you want by moving through the database using the <Next>, <Previous>, <Top> or <Bottom> options in the control panel, or by selecting <Find>. This will present you with a scrolling list from which you can quickly find the report you want to edit. Press the first number of the institution id to move quickly to the first report in that province. Use the up, down, pgdn, home and end keys to move quickly around this list. Press enter when you have found the report you want to edit. This will display the record for that report.
- e. Move to the fields you want to modify by using the pgup and pgdn keys to find the screen that contains the data that needs modification. Then use the up and down arrow keys to move to the field that needs changing.
- f. Make any other changes you need to and then quit or move to another for editing:
- g. Write on the report form your name and the date you edited the database record.
- h. When you have finished editing the report, write file it with the other completed reports.

EXERCISE: Edit several fields on a previously entered monthly report.

5. Data transmission:

- a. Creating a batch of records to send to a higher level:
 - i. Make sure the data entry screens are not displayed on your screen and select the Batch processing option from the Utility menu.
 - ii. Select create batch to create a batch of all the new or modified files.
 - iii. The batch files will automatically be created in the \batches sub-directory.
 - iv. If batch data will not fit on one floppy disk, use PCZIP or ZIPIT to compress the files.
 - v. Print out the batch report.
 - vi. Copy these files to a floppy disk to transfer to the next level. You should also keep a copy of this batch in your office until the next level has received and successfully loaded the software.

- vii. Forward the batch on to the next higher authority, noting the date sent on a transmission log.

EXERCISE: Prepare a batch to transmit data to the next higher level, copy it to floppy disks, print the batch report and fill out the transmission log book.

6. Troubleshooting and Configuring your PC to run this program:

- a. Config.sys: this module requires some expanded memory from your PC and the ability to open many files at the same time. Check that the following lines are in your config.sys file (this assumes that you are using DOS 5):
DEVICE=HIMEM.SYS
DEVICE=EMM386.EXE RAM 1024
FILES=40
BUFFERS=40
DOS=HIGH

- b. Printer problems:

- i. use Printer setup.. option of Files menu.
- ii. check printer cable connections.

- c. Files corrupted?

- i. Select re-index from Utility menu. Re-start system.
- ii. If no luck, restore data from latest back-up and re-enter all reports since that date. Re-index and then try again.

EXERCISE: Restore data from floppy disks using the PKUNZIP command.

7. Data maintenance:

- a. Anti-virus: organize a systematic anti-virus strategy
- b. Back-up your databases regularly
- c. Back-up your program and report files regularly.

ANNEX VI

FIELD TESTING OF
HMIS MONTHLY REPORT APPLICATION

A. **District Health Office, Swat**
September 29, 1992

Computer Operators: 1. Mr. Shamsheer Ali
2. Mr. Mohammad Ali

Outcomes:

1. Add "Wait" message while loading screens, in data-entry.
2. Set screen colors for monochrome monitor. Boxes color change to default.
3. Remove "Window" pad from main-menu.
4. "On Key Dnarrow" should be deactivated on exit from each screen.
5. In the installation procedure, Monthly Report module will be copied in \HID\MONTHLY sub-directory.
6. Change order on screen 5, Malaria Lab field.
7. Whooping Cough & Tetanus Valid clauses, these valid procedures are not correct.
8. Correct valid for screen 4 at the bottom of the screen as it does not display calculated values.
9. Correct screen flow while pgup from 6 to 5.

B. **Divisional Directorate, Malakand**
September 30, 1992

Computer Operators: 1. Mr. Bilal
2. Mr. Javed

Outcomes:

1. Darken boxes in printed Monthly Report Form (C.A. Pop., Pg 2, Total New Cases) so that it is clearer that these cells need to be entered. This darkening needs to be done on all boxes which are to be entered.
2. Access to (inst_id, month, year) during edit needs to be disabled so that duplicate records are not created.

3. Remove dark lines on section H "Total Cases" column.
4. On Monthly Report Form, month and year should be entered in numbers and appropriate boxes should be developed for these.
5. Problems of display of some calculated values.
 - Pg 1, % of expected births.
 - Pg 9, % of expected children under 1 year at Growth Monitoring.
6. Correct problems with inconsistent downward "On Key Label" from Pg 10.
7. Vacc. catchment population, screen should say "If different" from total catchment population.
8. Deletion of a record process, must delete from child files as well as master, so that orphan child records don't clutter the disk.
9. Change control panel, F3-Ctrl Panel, remove F2.
10. Take away boxes around "Total Fever Cases", "Total Cough More than 2 Weeks".
11. Report finder string needs to be reformatted so that text lines up correctly under labels.
"On Key Label F3" must be deactivated for finder and reactivate at exit to avoid recursive calls.
12. Batches should be copied to zip files on drive A.
13. Batch process does not consistently copy updated institutional files. In addition, the last_updt fields are incorrectly updated – sometimes they are not changed when some data is changed, whereas in the HID, they are changed anytime a record is viewed.

C. Divisional Directorate, Malakand
October 1, 1992

Computer Operators: 1. Mr. Mohammad Niaz, Computer Incharge
 2. Mr. Rehman Gul, S/C
 3. Mr. Mohammad Shafique, J/C

Outcomes:

1. Select on entry (@K picture function) for all fields as this makes active field more visible on monochrome screen.
2. Curative Care = "N" should skip through the whole Curative Care section.

3. "Show Gets" window at Pg 5 to display calaulated values when data is changed.
4. Change screen colors to give better contrast in monochrome.
5. Error flagging problem: error flag settings are reversed
6. Back-up & Restore procedure should be adopted compatible to HID, giving choice of drive A: or B: for floppy disk back-up.

BEST AVAILABLE DOCUMENT

ANNEX VII

FEEDBACK ON HID

During field testing of HMIS Monthly Report Application
At DHO Swat, DD Malakand, DHS NWFP (Peshawar
September 29 - October 1, 1992

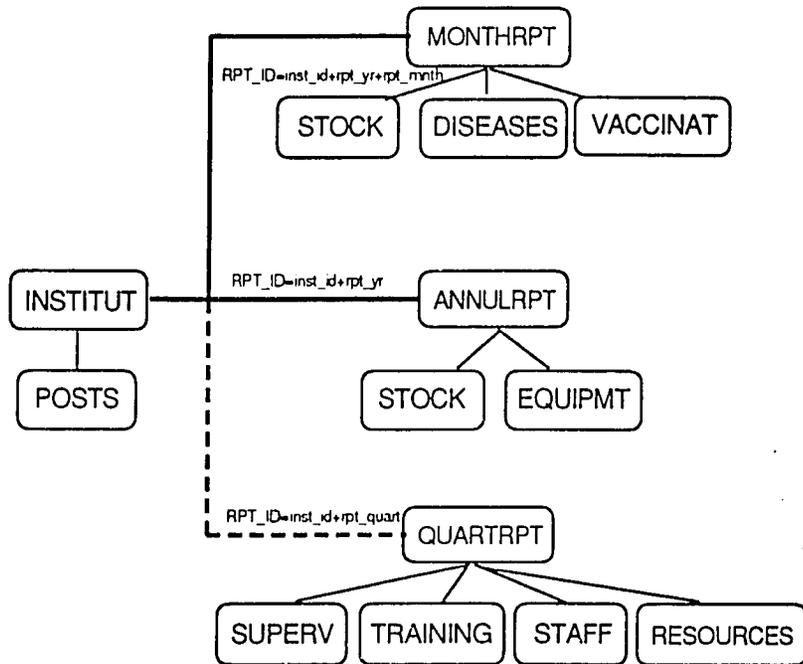
1. In User's Guide: Put samples of printed reports.
2. In User's Guide: Instructions on entering divisional office as an institution at districts computer center to avoid duplication of inst_id.
3. In Population Chart: Inst_Id should also be shown.
4. In Tehsil.dbf: Add new tehsils:
 - District Swat: 1. Martung
 - District Buner: 1. Gagra
2. Khadokhail
5. In Institution Finder: Either Inst_Id indexed or Inst-Name should be in first column (or separate Searcher should be added).
6. In the System menu pad: Add Geographic Location maintenance to add & change admin. units.
7. In Data Entry: Check duplication of records while adding or editing.
8. In Data Entry: Check available inst_id from blank records while adding new one.
9. In Data Entry: Control Panel should be activated first while entered into the data entry screen.
10. In Data Entry: Set <F3> to activate control panel.
11. In Inst_ID field: Add district code for 3rd digit.
12. In Status field: Add "Not Functioning".
13. In Inst_type field: "Family Welfare Center", and "Others" should be added.
14. In Reports: Class selection filter should include "Unknown"
15. In Reports: Index on Inst_name for short and long lists of health institutions.
16. In Reports: Use SQL for report generation to speed up the process.
17. In Report by District: U/Construction, Closed, etc. are not working.
18. In Report by District: "Unknown" status gives "U/Const."
19. In Report by Province: No. of MCH Centers are not added in the Total.

For Version 2.0 of HID:

20. In delete process: Prevent deletion of those institution's records which have records of Monthly Reports or other modules associated.
21. In Data Entry: Scatter/Gather Memvar for data-entry to prevent data file damage if computer is turned off.
22. In Data Entry: Activate Posts screen which should work like tables in Monthly Report Application.
23. In Physical Resource Section: Change according to Yearly Report's section on Building.
24. In Reports: Activate reports for sanctioned and filled posts.
25. In Reports: Add charts.

ANNEX ~~VII~~

Data file structure of HMIS/FLCF (excludes validation/lookup files)



Directory Structure for Hard Disk Storage:

<u>C:\HID</u>	HID exe and data files + foxpro.esl, foxpro.eso
\MONTHLY\	Monthly reports exe and data files
\ANNUAL\	Annual reports exe and data files
\BATCHES\	Holding directory for batch transmission data files

STOCK.dbf
 Field FIELD_TY FIELD_LE FIELD_DEC
 RPT_ID C 8 0
 STK_CODE C 2 0
 OPEN_BAL N 6 0
 STK_RCD N 6 0
 ISS_CARE N 5 0
 DISCARDED N 5 0
 BALANCE N 6 0
 DAYS_OUT N 2 0
 40

ANNUAL.DBF
 FIELD_NAME FIELD_TY FIELD_LE FIELD_DEC
 INST_ID C 6 0
 RPT_YEAR C 2 0
 BATCH_NO C 9 0
 SUPERV_NO N 2 0
 POP_TOT N 7 0
 CHW_NO N 4 0
 TBA_TRND N 3 0
 TBA_UNTRND N 3 0
 PCT_GT20KM N 3 0
 ENTRY_DATE D 8 0
 LAST_UPDTE D 8 0
 BUILDING C 1 0
 LAST_RENOV D 8 0
 ACCES_ROAD C 1 0
 ELECTRIC N 1 0
 WATER N 1 0
 LATRINE N 1 0
 AMBULANCE N 2 0
 AMB_FUNC N 2 0
 JEEP_CAR N 2 0
 JEEP_FUNC N 2 0
 MOTORCYCLE N 2 0
 MOTO_FUNC N 2 0
 BICYCLE N 2 0
 BIC_FUNC N 2 0
 OTHER_TRNS N 2 0
 OTHER_FUNC N 2 0
 88

EQUIP.DBF
 FIELD_NAME FIELD_TY FIELD_LE FIELD_DEC
 RPT_ID C 8 0
 STK_CODE C 2 0
 OPEN_BAL N 5 0
 STK_RCD N 5 0
 DISCARDED N 5 0
 BALANCE N 5 0
 UNSERVABL N 5 0
 REPAIRABL N 5 0
 SERVICABL N 5 0
 45

ANNUAL REPORTS DATABASE FILE SIZE ESTIMATE

Assumes maximum no. of facilities: 9000

FILE	RECORD SIZE	NO. RECS PER REPORT	TOTAL SIZE
ANNULRPT	88	1	88
STOCK	40	45	1,800
EQUIP	45	54	2,430

Total size of 1 record: 4,318 BYTES

Total size for 1 year: 37.95 MEGABYTES

**Documentation for Field Office Expense
Reporting Module
Draft November 2, 1992**

1. **Purpose of the Reporting Module:** The Field Office Expense system, which was developed for MSH Field Office use by the Finance Office has very rudimentary reporting and no ad-hoc query capabilities. In addition, the existing reports do not support postscript output which has caused problems in the Pakistan field office in particular because everyone shares a single postscript printer. Due to the fact that field offices do not have the source code for the original Clipper-compiled system, it was not possible to incorporate any changes into the original executable application.

To overcome some of these problems, this add-on module was created to improve the use of the data entered through the Field Office Expenses system. This module consists of a pull-down menu that provides the following limited functions:

- a. Generates an updated data set with the requisite index files.
- b. Enables users to create selection criteria through the Foxpro browser dialog and view selected records in a read-only browse table.
- c. Provides a menu of 5 standard report formats through which all or selected sets of records can be printed. The reports include:
 - i. Expenses by Account
 - ii. Expenses by Task
 - iii. Expenses by Check No.
 - iv. Expenses by Voucher No.
 - v. A summary report aggregating all expenses by Account No.
 In addition, users can select and modify a variety of printer drivers for report output.

2. **Files used by the system:** The system consists of a compact executable file, FERPT.EXE and the FOXPRO.ESL and FOXPRO.ESO files which are needed to run the compact executable. These files and their accompanying data and report form files are stored in a sub-directory of the Field Expense System called \FERPTS. The remainder of the files used include:
 - a. **Original Data Files:** These are the ones that are maintained by the Clipper application (FE.EXE), and they are only used to copy updated data using the File option "Generate rpt. file". No changes are done to this data by the system. The files used are FE.dbf, FEACCTS.dbf, and FETASKS.dbf.
 - b. **Generated Data files:** These are the files used by the various report forms and the browser. They are copies of the data files and differ primarily in the types of indexes that they use (all files with the extension .CDX). The files created are FEFOX.dbf, FEACCTS.dbf and FETASKS.dbf.
 - c. **Report Formats:** These are the foxpro .FRX files:
 - i. FEBYACCT.frx
 - ii. FEBYTASK.frx

- iii. FEBYCHK.frx
- iv. FEBYVCH.frx
- v. ACCTSUM.frx
- d. Foxpro resource files: FOXHELP.dbf the on-line help file and FOXUSER.dbf, the file containing printer definitions and screen colors, etc...

3. **Startup instructions:** With all the files loaded in a sub-directory call \FERPTS, start the application as follows:

- a. CD \FE\FERPTS <Enter>
- b. FERPTS <Enter>

This will load the foxpro executable file and display the main menu.

4. **Using the Menu Options:**

- a. Activate the menu pads by selecting them with a mouse or pressing <Alt> or the <F10> key.
- b. Highlight the desired option by dragging with the left mouse button pressed or <Up> and <Down> keys and then press enter.
- c. **Generate Report Files:** Before running reports, you should generate the report files using that option of the File menu, just in case more transactions have been added to the FE system since the last time you printed reports.
- d. **Browse records:** The File menu gives you the option of using the Browser to browse the Expenses file. You cannot make any changes to the data as the browse window is in read-only mode to protect the integrity of the data. Create selection criteria using the field name popup at the center of the screen, then press the <Add> button to insert the criterion in the list box. Multiple criteria can be added in this manner and all of them will be "and-ed" together. The browser dialog does not enable you to do a union of multiple criteria using the "or" operator. When you are satisfied with your query, press the <<Browse>> button to see the matching records. You can move around in these records with the mouse on the elevator buttons or using the <Tab> and <PgDn>/<PgUp> keys. Press escape to return to the browser dialog and <Quit> to return to the main menu.
- e. **Set up Printer:** Check to see that the correct printer driver has been selected by selecting the Printer Setup... option.
- f. **Run Reports:** Select any of the reports from the Reports menu. Once a report has been selected:
 - i. the Enter Selection Criteria dialog will appear on the screen. Create a filter to select out records or press <<O.K>> to print the report with all the data in the files. Typical filters that you may want to set include:
 - (1) FTRANSDATE>={1/1/91} and FTRANSDATE<{1/1/92}: this selects all transactions for the 1991 calendar year
 - (2) "SMITH"\$UPPER(FPAYEE): the name SMITH is contained in the payee field (the upper function converts the payee data to upper case in case the data was entered in upper/lower).

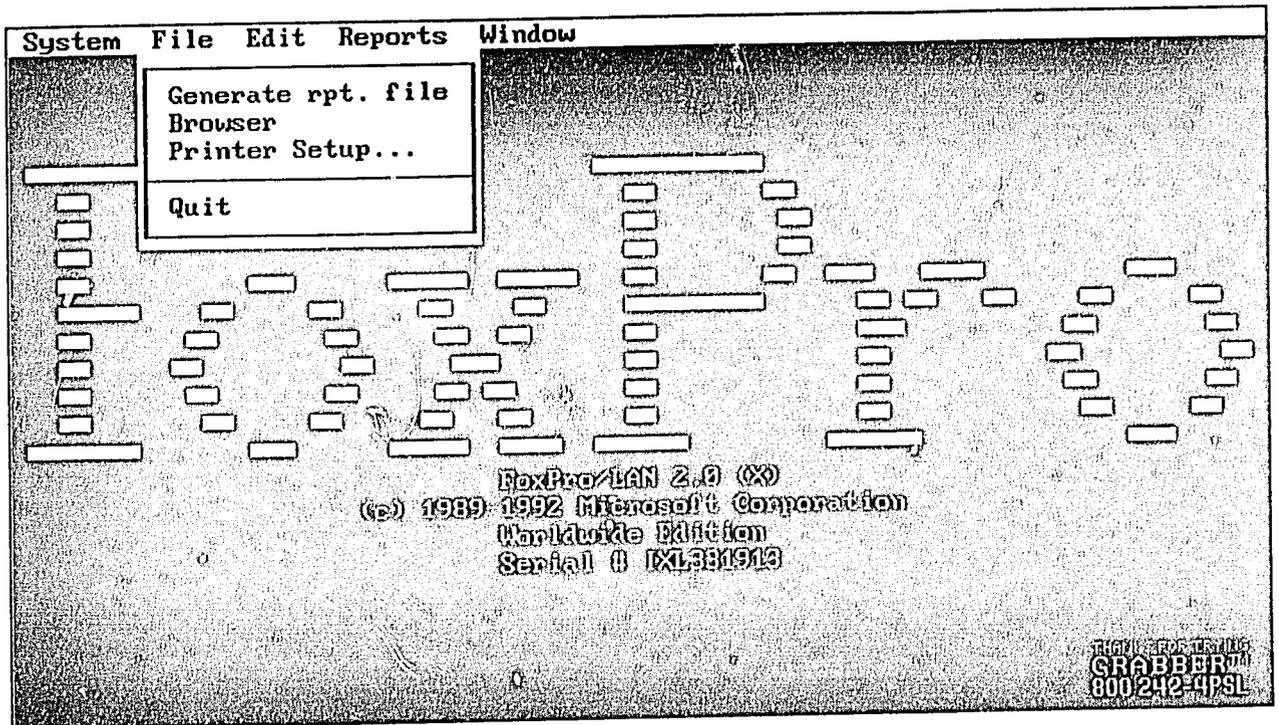
(3) FACCOUNT="5314'

Press <Validate> to check the syntax of your filter expression and then <<O.K.>> if you are satisfied that it is correct.

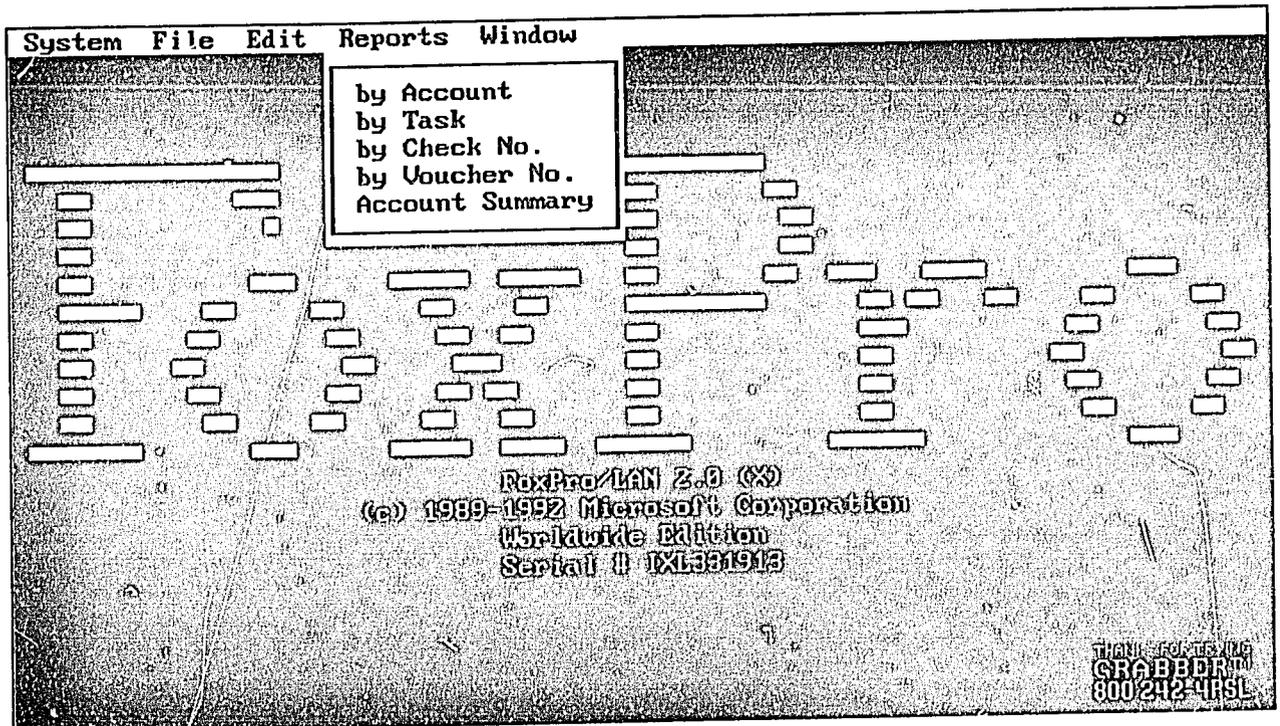
- ii. Select the destination for your report, this can be either the Printer or the Screen. Select one or the other by clicking in the check box with the mouse or tabbing to the check box and pressing <Space>. Then tab over to the <Print> button and press enter.
 - iii. If you are sending the report to the screen, you can pan across the screen using the arrow key or the elevator button at the bottom of the screen. Press M to continue scrolling down in the report (you cannot scroll back up). When you have seen enough press D for Done to return to the menu.
- g. **Quit:** Return the DOS prompt by select the quit option from the File Menu.

BEST AVAILABLE DOCUMENT

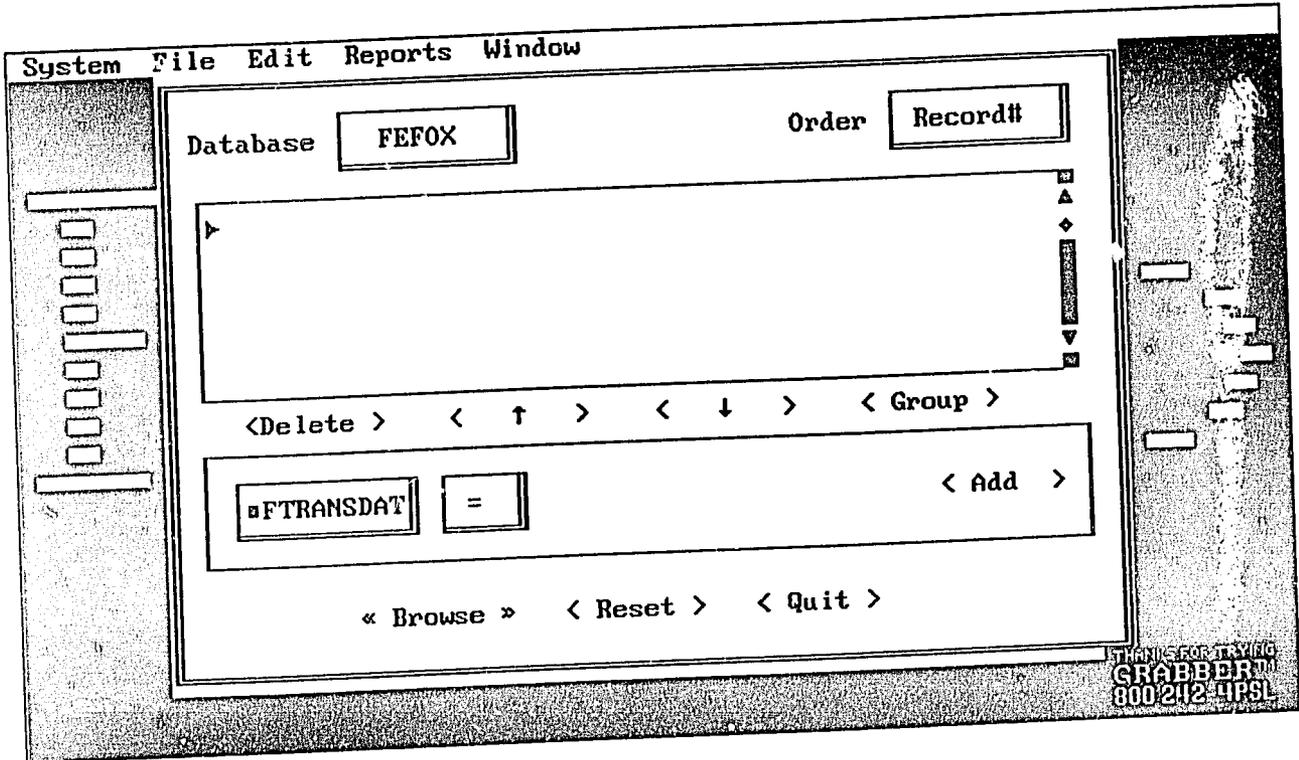
5. Reports Module screen displays:
File Menu



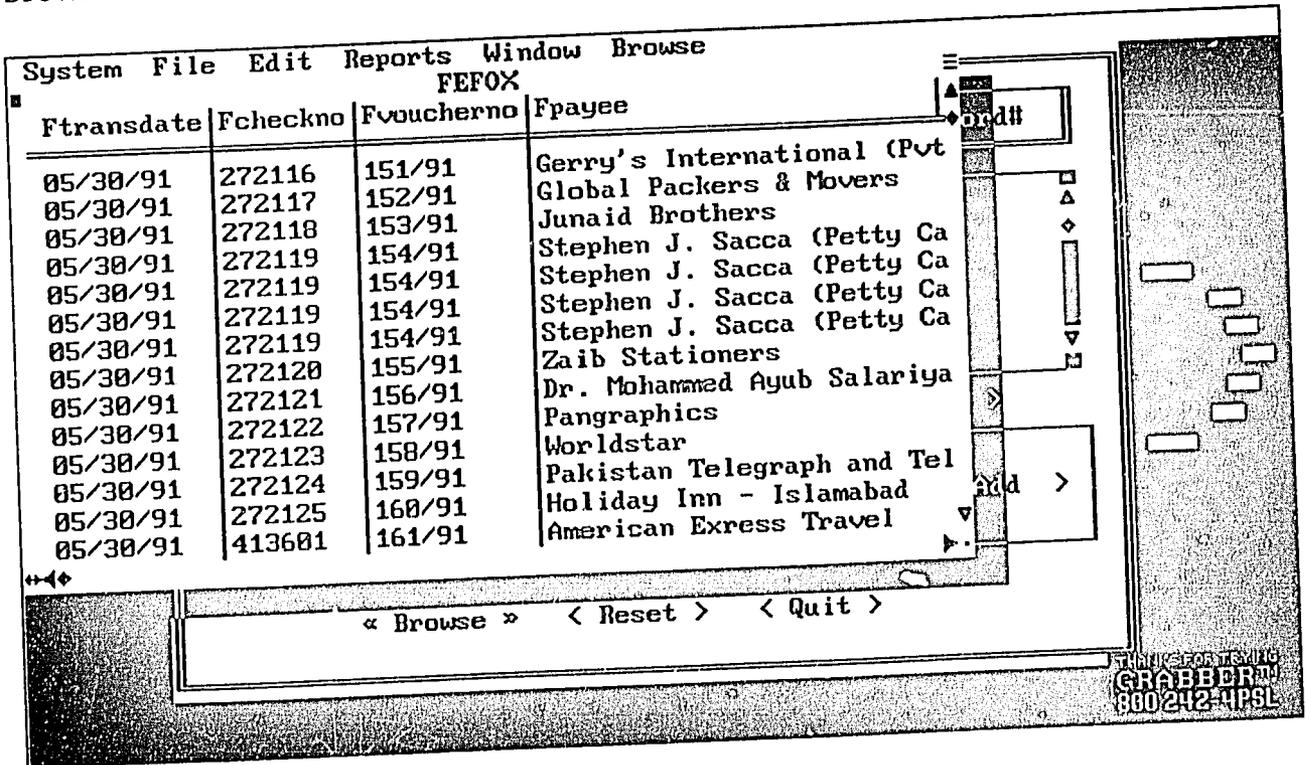
Reports Menu



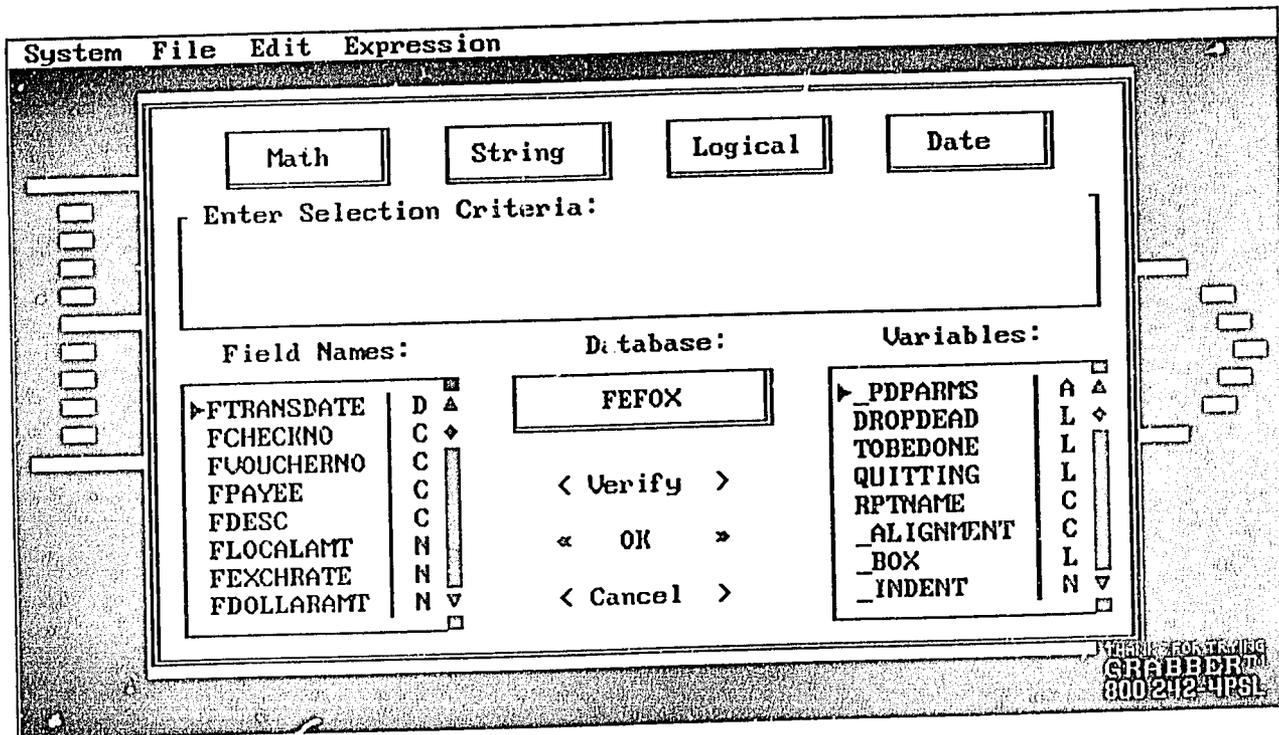
Browser



Browse result table



Set filter dialog



BEST AVAILABLE DOCUMENT

Management Sciences for Health
 Field Expense System
 Summary of expenses by Account No.

SAMPLE REPORTS
 ACCTSUM.FRX Report

Records selected for: fefox.ftransdate>={1/1/91} and fefox.ftransdate<{1/1/92}

Account	Description	Local Currency	US Dollars
1590	Local Advances	25,097.90	1,021.73
5103	Consultants-Overseas (Field)	551,598.93	22,425.36
5120	Salary/Wages-Coop Field Staff	49,287.00	2,004.56
5147	Travel-Local at Duty Station	561,290.76	22,920.30
5151	Transportation Pers Belongings	710.00	28.89
5182	Telephone and Telegraph	350,656.62	14,327.34
5183	Office Supplies	483,807.12	19,793.60
5184	Books and Subscriptions	86,421.00	3,509.10
5185	Reproduction-Xerox Rental	22,670.00	922.32
5186	Postage & Shipping	97,242.50	3,987.27
5195	Computer Supplies	51,935.00	2,128.76
5203	Outside Services-Typing	3,160.00	128.62
5204	Outside Services-Computer Work	360.00	14.61
5209	Outside Services-Miscellaneous	22,871.00	944.13
5233	Insurance-Medical	3,310.90	134.59
5261	Subcontracts-Cost Reim Ongoing	14,985,508.00	613,931.80
5293	Conference-Business	5,127.00	208.72
5298	Miscellaneous Expense	6,970.70	283.97
5317	Medical Equipment and Supplies	75,849.64	3,003.43
5319	Vehicle Repair and Maintenance	24,288.36	994.77
Grand Total of expenditure:		17,406,162.43	712,713.87

BEST AVAILABLE DOCUMENT

40

Management Sciences for Health
Field Expense System
Expenses by Check No.

Records selected for: *SMITH*\$upper(fefox.fpayee)

Chk No	Date	Account	Payee	Description	Local Amt	Ex Rate	Dollar Amt
483883	11/30/91	5147-	Duane L. Smith	Travel:Local at Duty	1819.00	24.5742	74.02
497702	01/22/92	5186-	Dr. Duane L. Smith	Postage and Shipping	1430.28	24.6141	58.11
497772	02/29/92	5147-200	Dr. Duane L. Smith	Travel:Local at Duty	22534.00	24.5443	918.10
497772	02/29/92	5147-100	Dr. Duane L. Smith	Telephone & Telegraph	19705.00	24.5443	802.83
497772	02/29/92	5182-200	Dr. Duane L. Smith	Telephone & Telegraph	1819.00	24.5443	74.11
497772	02/29/92	5182-100	Dr. Duane L. Smith	Telephone & Telegraph	303.00	24.5443	12.35
497800	03/08/92	5147-200	Dr. Duane L. Smith	Travel:Local at Duty	3332.00	24.5443	135.75
697134	04/22/92	5147-100	Duane Smith	Travel:Local at Duty	3926.00	24.6738	159.12
700002	05/27/92	5185-100	Duane L. Smith	Reproduction - Xerox	24.00	24.9426	0.96
700002	05/27/92	5182-100	Duane L. Smith	Telephone & Telegraph	578.00	24.9426	23.17
700002	05/27/92	5147-100	Duane L. Smith	Travel: Local at Duty	6978.00	24.9426	279.76
707857	08/27/92	5184-300	Duane Smith	Books & Subscriptions HIS	1506.00	25.1000	60.00
707857	08/27/92	5184-200	Duane Smith	Books & Subscriptions TRG	348.00	25.1000	13.86
*** Total ***					64302.28		2612.14

BEST AVAILABLE DOCUMENT

AGE NO. 1
1/03/92

Management Sciences for Health
Field Expense System
Expenses by Task

FEBY+ASK. frx Report

Records selected for: *SMITH*\$upper(fefox.fpayee)

Chk No	Date	Payee	Description	Local Amt	Ex Rate	Dollar Amt	Acct	Task	STask
** Task:									
183883	11/30/91	Duane L. Smith	Travel:Local at Duty	1819.00	24.5742	74.02	5147		
197702	01/22/92	Dr. Duane L. Smith	Postage and Shipping	1430.28	24.6141	58.11	5186		
** Subtotal **				3249.28		132.13			
** Task: 100 Management									
197772	02/29/92	Dr. Duane L. Smith		19705.00	24.5443	802.83	5147	100	
197772	02/29/92	Dr. Duane L. Smith		303.00	24.5443	12.35	5182	100	
697134	04/22/92	Duane Smith	Travel:Local at Duty	3926.00	24.6738	159.12	5147	100	
700002	05/27/92	Duane L. Smith	Reproduction - Xerox	24.00	24.9426	0.96	5185	100	
700002	05/27/92	Duane L. Smith	Telephone & Telegraph	578.00	24.9426	23.17	5182	100	
700002	05/27/92	Duane L. Smith	Travel: Local at Duty	6978.00	24.9426	279.76	5147	100	
** Subtotal **				31514.00		1278.19			
** Task: 200 Training									
497772	02/29/92	Dr. Duane L. Smith	Travel:Local at Duty	22534.00	24.5443	918.10	5147	200	
497772	02/29/92	Dr. Duane L. Smith	Telephone & Telegraph	1819.00	24.5443	74.11	5182	200	
497800	03/08/92	Dr. Duane L. Smith	Travel:Local at Duty	3332.00	24.5443	135.75	5147	200	
707857	08/27/92	Duane Smith	TRG	348.00	25.1000	13.86	5184	200	
** Subtotal **				28033.00		1141.82			
** Task: 300 Health Information									
707857	08/27/92	Duane Smith	Books & Subscriptions HIS	1506.00	25.1000	60.00	5184	300	
** Subtotal **				1506.00		60.00			
*** Total ***				64302.28		2612.14			

BEST AVAILABLE DOCUMENT

42

Management Sciences for Health
Field Expense System
Expenses by Voucher No.

FEBYVCH. Frx Report

Records selected for: *SMITH*\$upper(fefox.fpayee)

Voucher	Date	Account	Payee	Description	Local Amt	Ex Rate	Dollar Amt
232/92	11/30/91	5147-	Duane L. Smith	Travel:Local at Duty	1819.00	24.5742	74.02
355/92	01/22/92	5186-	Dr. Duane L. Smith	Postage and Shipping	1430.28	24.6141	58.11
428/92	02/29/92	5147-200	Dr. Duane L. Smith	Travel:Local at Duty	22534.00	24.5443	918.10
428/92	02/29/92	5147-100	Dr. Duane L. Smith		19705.00	24.5443	802.83
428/92	02/29/92	5182-200	Dr. Duane L. Smith	Telephone & Telegraph	1819.00	24.5443	74.11
428/92	02/29/92	5182-100	Dr. Duane L. Smith		303.00	24.5443	12.35
456/92	03/08/92	5147-200	Dr. Duane L. Smith	Travel:Local at Duty	3332.00	24.5443	135.75
541/92	04/22/92	5147-100	Duane Smith	Travel:Local at Duty	3926.00	24.6738	159.12
613/92	05/27/92	5185-100	Duane L. Smith	Reproduction - Xerox	24.00	24.9426	0.96
613/92	05/27/92	5182-100	Duane L. Smith	Telephone & Telegraph	578.00	24.9426	23.17
613/92	05/27/92	5147-100	Duane L. Smith	Travel: Local at Duty	6978.00	24.9426	279.76
80/93	08/27/92	5184-300	Duane Smith	Books & Subscriptions HIS	1506.00	25.1000	60.00
80/93	08/27/92	5184-200	Duane Smith	TRG	348.00	25.1000	13.86
*** Total ***					64302.28		2612.14

BEST AVAILABLE DOCUMENT

43

Management Sciences for Health
Field Expense System
Expenses by Account No.

FEBYACCT. frx Report.

Records selected for: *SMITH*\$upper(fefox.fpayee)

Chk No	Date	Payee	Description	Local Amt	Ex Rate	Dollar Amt
** Account-Task-SubTask:	5147-	-				
483883	11/30/91	Duane L. Smith	Travel:Local at Duty	1819.00	24.5742	74.02
** Subtotal **				1819.00		74.02
** Account-Task-SubTask:	5147-200-					
497772	02/29/92	Dr. Duane L. Smith	Travel:Local at Duty	22534.00	24.5443	918.10
** Subtotal **				22534.00		918.10
** Account-Task-SubTask:	5147-100-					
497772	02/29/92	Dr. Duane L. Smith		19705.00	24.5443	802.83
** Subtotal **				19705.00		802.83
** Account-Task-SubTask:	5147-200-					
497800	03/08/92	Dr. Duane L. Smith	Travel:Local at Duty	3332.00	24.5443	135.75
** Subtotal **				3332.00		135.75
** Account-Task-SubTask:	5147-100-					
697134	04/22/92	Duane Smith	Travel:Local at Duty	3926.00	24.6738	159.12
700002	05/27/92	Duane L. Smith	Travel: Local at Duty	6978.00	24.9426	279.76
** Subtotal **				10904.00		438.88
** Account-Task-SubTask:	5182-200-					
497772	02/29/92	Dr. Duane L. Smith	Telephone & Telegraph	1819.00	24.5443	74.11
** Subtotal **				1819.00		74.11
** Account-Task-SubTask:	5182-100-					
497772	02/29/92	Dr. Duane L. Smith		303.00	24.5443	12.35
700002	05/27/92	Duane L. Smith	Telephone & Telegraph	578.00	24.9426	23.17
** Subtotal **				881.00		35.52
** Account-Task-SubTask:	5184-300-					
707857	08/27/92	Duane Smith	Books & Subscriptions HIS	1506.00	25.1000	60.00
** Subtotal **				1506.00		60.00
** Account-Task-SubTask:	5184-200-					
707857	08/27/92	Duane Smith	TRG	348.00	25.1000	13.86
** Subtotal **				348.00		13.86

11

Management Sciences for Health
Field Expense System
Expenses by Account No.

Records selected for: *SMITH*\$upper(fefox.fpayee)

Chk No	Date	Payee	Description	Local Amt	Ex Rate	Dollar Amt
** Account-Task-SubTask:		5185-100-				
700002	05/27/92	Duane L. Smith	Reproduction - Xerox	24.00	24.9426	0.96
** Subtotal **				24.00		0.96
** Account-Task-SubTask:		5186- -				
497702	01/22/92	Dr. Duane L. Smith	Postage and Shipping	1430.28	24.6141	58.11
** Subtotal **				1430.28		58.11
*** Total ***				64302.28		2612.14

BEST AVAILABLE DOCUMENT

45