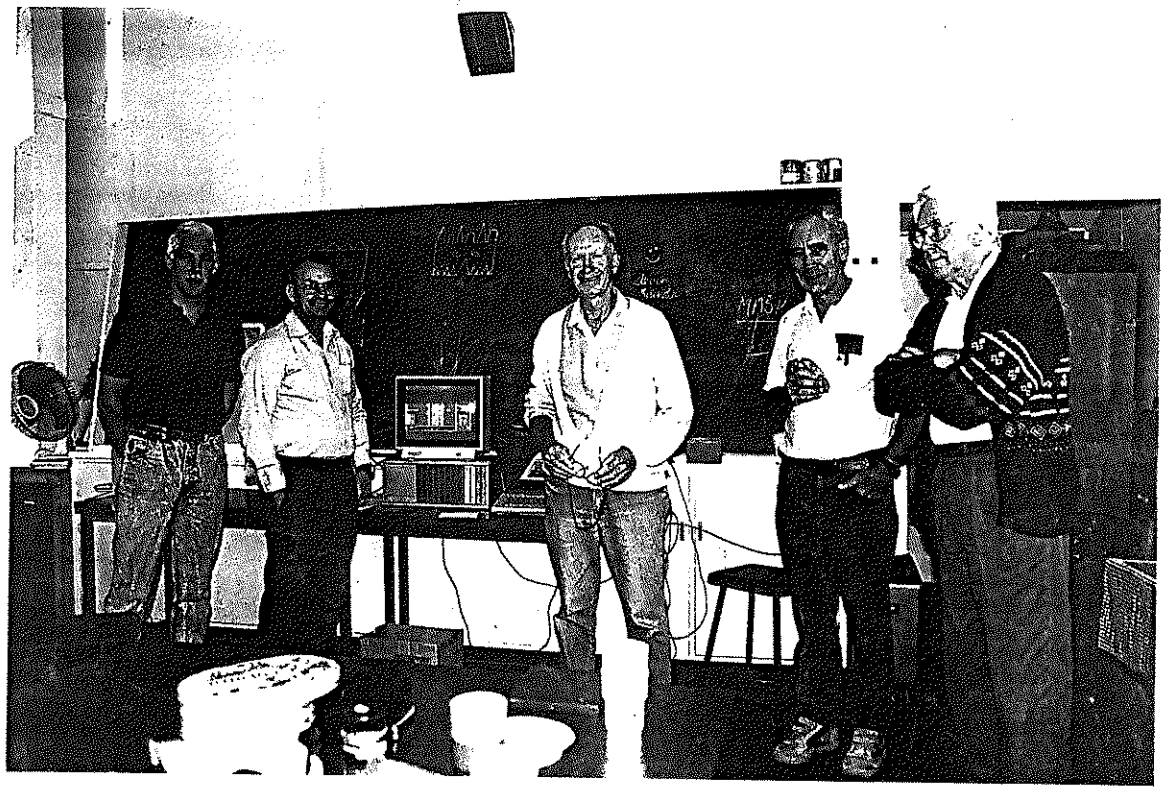
TI-99 USERS OF PERTH

TIUP TIT BIT

VOLUME 14 No. 3
OCTOBER 1995.

Picture Gallery - TIUP Committee.

At the 13th. Annual General Meeting of the Texas Instrument (99) Users of Perth (TIUP), elected the following members as office bearers for the next twelve months.



Above (L to R) are: Greg Buck (Treasurer), Bill La Frentz (Vice President), Merve Trowbridge (President), Frank Graham (Secretary) and Matt Bruekers (Auditor).

PLEASE NOTE,
OUR NEW MAILING
ADDRESS IS

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SECRETARY TIUP
20 HUDSON ST.
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WESTERN
AUSTRALIA.

EDITORIAL by F.Graham Secretary/Editor

I am not into buying 'lotto' tickets, betting on the 'hay burners', playing the 'pokies' or entering the 'sweep' on Melbourne Cup Day, mainly because I rarely ever collect, besides I need all my good luck just to get this edition on its way.

So far, I have been very fortunate in receiving a number of newsletter articles, from our Vice President Bill La Frentz, outlining the strategies needed to run some of the programs that he has typed in from MICROpendium, thank you Bill.

Last Monday my good luck doubled, in the post was a large envelope from Geoff Warner (past Secretary/Editor) with his outline of the contents of his DOMJUNE94, now listed as TIUPDOM/Ø1, the one that kicked the whole DOM thing off at TIUP, thank you Geoffery.

TIUP TIt BITS DISCLAIMER

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Please submit any contributions to the Editor care of:

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ADVERTISING

Members and newsletter subscribers may advertise their PERSONAL computer - related products in TIt BITs free of charge (subject to space limitations and the Editor's discretion). Commercial rates by negotiation.

DOSK OF THE MONTH (DOM) # 1

PREAMBLE

Despite the **DOM** being my (brilliant ?) idea, I have been more than a little tardy in doing my write - up on the contents of the original, which dates back some 12 months

My apologies for this oversight. What follows is a short history of the scheme from its conception, plus the obligatory disk contents section, and the rationale behind the inclusion of particular applications on that first **DOM** :

THE HISTORY

For the initial stages the idea was that, as we have a huge software library that many members have probably not accessed recently, if at all, each Committee member could take turns in compiling a selection of his favourite programs or collection of programs / utilities related to a particular subject from the library and putting it together on disk for the next meeting

Obviously we can only do this with non - copyrighted programs typed in from magazines; self - authored and Public Domain / Shareware programs and NOT the purchased variety such as Page Pro, TI Artist etc.

This original idea was essentially for distribution to our country members and others who cannot regularly attend **TIUP** meetings as a **'Value Added Service'** to their annual **TIUP** subscription. The concept was taken one step further by **Mr 'Have TI, Will Travel'**, our then Vice President and current Secretary **Frank Graham**, who took to personally distributing **DOM'S** to other Australian User Groups

This is a terrific concept, but a little difficult to realise in practice, however it did generate some interest with **TIBUG**, the Queensland group. I believe that they commenced a similar **DOM** scheme, but I don't think Garry or Colin C or any of the other committee members actually deliver disks personally to interstate groups

As the **DOM** idea was mine in the first place, I naturally felt obliged to compile the first, as I did not want to place further burdens on our over - worked Committee. **Bill LaFrentz** however, took to the idea with gusto and has since spend many hours typing in, debugging and testing all manner of programs for subsequent **DOM'S**. He has also been right on the ball as far as writing up the contents, as can be seen from **TIUP TIt BITS v14 # 2**

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THE CONTENTS

As we wanted to reach as wide a potential audience as possible, Committee decided upon a **SSSD** format for the **DOM**. This, however, gave rise to the possibility that we may not be able to fit much on the disks, and so Barry Boone's **Archiver** (ARC) was chosen as application # 1 on **DOM # 1**

The late John Birdwell's **Disk Utilities** (DISKU) was the next cab off the rank, due to it's advanced capabilities such as the ability to annotate or comment upon each file on the disk, and to date the disk

As I was already on a utilities / useful programme theme, I decided to round the disk off with **SNAP CALC**, an Extended Basic Spreadsheet programme that generated quite an amount of interest when I demonstrated it back in the days of meetings in the Facilities Room / Swimming Club Clubroom at the old Belmont Swimming Pool

SNAP CALC is from the old **Home Computer Magazine**, with the original listing being published in the August 1984 issue and, although a little slow, has a lot of quite advanced capabilities for its day. As it could be run from cassette, it served me well by helping me with my new car purchase decisions and household budgeting / financial tracking while I was 'sans disk drive and Multiplan'. I admit that I also used it to justify the purchase of my original **PEB** to expand my system - a truly useful piece of software and one that I still have a soft spot for

The programme is fairly intuitive for those familiar with spreadsheets and the **TI - 99 / 4A** and much use is made of the function key. Although there should be a copy of the instructions (in fact a photocopy of the article that accompanied the listing in **HCM**) in the **TIUP** library, the keystrokes for the main functions are listed below :

FCTN 1	**LOAD** data from disk or tape
FCTN 2	**SAVE** data to disk or tape
FCTN 3	**CANCEL** entry
FCTN 5	**CALCULATE** the logic model
FCTN 6	**PRINT** report
FCTN 7	**LOGIC ENTRY** mode
FCTN 9	**EXIT** Snap Calc

FCTN E	move cursor **UP** 1 cell
FCTN S	move cursor **LEFT** 1 cell
FCTN D	move cursor **RIGHT** 1 cell
FCTN X	move cursor **DOWN** 1 cell

(continued on page

SNAP CALC KEY STROKES (cont.)

CTRL E	move cursor **UP** 5 cells
CTRL S	move cursor **LEFT** 3 cells
CTRL D	move cursor **RIGHT** 3 cells
CTRL X	move cursor **DOWN** 5 cells

THE DISK DIRECTORY

DISK NAME : DOMJUNE94

FILE NAME	SIZE	TYPE	COMMENTS
ARC	33	Prog	Archiver - run from Fweb Loader option 3 or Editor Assembler option 5
CHAR	6	Prog	Character set
CHARA1	5	Prog	Character set
DISKU	33	Prog	Part 1 of Disk Utilities - run as per Archiver
DISKUDOC	108	d 80	Disk Utilities Documents - print via FWEB or TI Writer
DISKUREF	50	d 80	Reference sheet for Disk Utilities - print out as per documents
DISKV	33	Prog	Part 2 of Disk Utilities
DISKW	25	Prog	Part 3 of Disk Utilities
SNAP_CALC	33	Prog	Extended Basic spreadsheet

Enjoy your disk of the month

Geoff WARNER

FOOTNOTE :

The Belmont Swimming Pool, our old meeting place, has been redeveloped into the Belmont Oasis Leisure Centre, complete with indoor heated pools, gymnasium, meeting rooms, kitchen facilities and three basketball courts. I still spend a lot of time there due to my involvement in the Junior State Basketball League, however our old meeting room is now the Plant Room for the complex

HOW TO ACCESS / FILES

By Jerry Keisler
L.A. 99ers

I have been asked by several members how to run some of the programs on our DOM. The following is a list of what you may find in your disk directory and how to run it.

If your disk has a load file, it may run all the files on the disk regardless of type.

PROGRAM FILES (PG)

There are several options for running these files.

EXTENDED BASIC (XB)

Will load and run automatically when you select XB and the disk is in drive 1, if it has a load file. Or can be run by typing RUN <Enter> or RUN "DSK1.name" <Enter>
If the program loads correctly but you get a BAD VALUE error when it runs, you need to load the program into basic (no chars above 143 are allowed in XB). If the program file is more than 45 sectors and won't load, you have to open up more memory. Do this by typing:

CALL FILES(1) <Enter> NEW <Enter>
OLD DSKn.name <Enter> RUN <Enter>

BASIC

Programs need to be loaded by typing:

OLD DSKn.name <Enter> RUN <Enter>

Most Basic programs will load and run in XB but not visa versa. If you get a FOR-NEXT error in line xxx and when you edit the line you get a lot of nonsense, the program is written in XB. The same is true if the sectors are greater than 45. More space is needed in the computer. See CALL FILES above. If you still get a memory full and tried XB, then most likely it can be run on tape (OLD CS1) without the expansion box turned on.

EDITOR ASSEMBLER (EA)

If a program file will not load and run in Basic or XB and gives an I/O ERROR 50, it may be an assembly language program. These can be run using BOOT, the Editor Assembler module, option #5 with DSKn.name or Funnelweb's RUN option of Disk Review. These program files are listed in consecutive order such as MASS, MAST,MASU. or UTIL1. UTIL2, UTIL3. The files will normally have 33 sectors.

(continued on page 7

GRAMULATOR

These require a GROM simulator card or box. The files contain 34 sectors and have the same name with the numbers 1 through 66 attached to files 2 through 8. Follow your GROM simulator instructions to load and run.

OTHER PROGRAM FILES

Some specialized program files can only be loaded from a special module such as ADVENTURE (54 sectors). PERSONAL RECORDKEEPING, STATISTICS, TUNNELS OF DOOM (52 sectors).

DIS VAR 80 FILES (DV80)

These are usually text or documentation files (DOCS, README, ETC.) They are instructions on how to run programs on the disk. Read or print them using TI Writer, Funnelweb, Boot or the (V,T or P) option of several disk managers.

DIS VAR 163 FILES (DV163)

This is an XB file in MERGE format. It can be merged into a program already in computer memory. Type:

MERGE DSKn.name <Enter>

You must do this even if no program is in memory. To save a file in MERGE format, type:

SAVE DSKn.name, MERGE (in XB only)

DIS FIX 80 FILES (DF80)

Use EDITOR ASSEMBLY MODULE, LAR or Funnelweb to load these. Some files will auto load and/or auto start. use LOAD and RUN option #3. Type:

DSKn.name <Enter>

If the program does not run but asks for a second file name, you must do #1 and #2 or just #2 below.

#1 If there are multi files for the program type:
DSKn.name <Enter> for each file.

#2 Then press enter. If the program does not start, enter the program name. The program name could be START, BEGIN, GAME, LOAD, RUN, FIRST, etc. Funnelweb will give you a list of names found in the program.

DIS FIX 128 FILES (DF128)

These are usually ARCHIVED files. You must unarchive these files before you can run them. Use ARC303 OR ARC303G.

(continued on page 8)

INT VAR 254 FILES (IV254)

These files usually have more than 45 sectors and are Extended Basic requiring memory expansion. They do not require CALL FILES (1). Basic cannot be used. The same commands are used such as RUN or OLD DSKn.name. The programs are usually so long that they cannot be saved to tape. (SAVE CS1)

DATA FILES

Files such as INT FIX 108, INT VAR 128, INT VAR 64 and some program files are data files that can be used by a program on the disk. They will not RUN and should be left on the disk with the other programs.

QUICK REFERENCE

TYPE	SIZE	TRY
PG		XB, Basic, EA CART
PG	33	EA #5, BOOT, FW
PG	34	GROM SIMULATOR
PG	52	TUNNELS OF DOOM
PG	54	ADVENTURE
DV	80	TI-WRITER, FIC
DV	63	XB MERGE
DF80		EA #3
DF128		ARCHIVER
IV254		XB
IV245		XB
ANY		DATA

SOME OTHER FILES

TI-BASE

ENDS WITH	TYPE	DESCRIPTION
/P	IF255	PROGRAM
/H	DV80	HELP
/C	DV80	COMMAND OR
/C	IF40	COMMAND
/D	IF	DATA BASE DATA
/S	IF255	DATA BASE STRUCTURE

TI-ARTIST

_C	25PG	PICTURES COLOR
_P	25PG	PICTURES PATTERN
_F	DV80	CHARACTER FONT
_S	18DV80	SLIDES
_I	DV80	INSTANCE
_V	DF12	VECTOR
_M	DV254	MOVIE

FunnelWeb 5.01 help sheet.

General Key Functions

<Fctn-0> = Line numbers on/off.
<Ctrl-3> = Screen Color.
<Fctn-9>,<Ctrl-C> = Command ESCape.
Note: While on the Command Line, the text page may be scrolled up or down with <Fctn-E>,<Fctn-X>

Cursor Movement

<Fctn-S>,<Ctrl-S> = Move left.
<Fctn-D>,<Ctrl-D> = Move right.
<Fctn-E>,<Ctrl-E> = Move up.
<Fctn-X>,<Ctrl-X> = Move down.
<Fctn-6>,<Ctrl-Q> = Page up.
<Fctn-4>,<Ctrl-A> = Page down.
<Fctn-5> = Screen window right.
<Ctrl-4> = Move to start of last paragraph.
<Ctrl-6> = Move to start of next paragraph.
<Ctrl-H> = Goto first page of document.
<Ctrl-J> = Goto last page of document.
<Ctrl-L> = Home (Upper left corner).
<Ctrl-V> = Move to beginning of line.
<Ctrl-Z> = Move right to end of line.
<Ctrl-Y> = Release right or left margin.

Edit Key Combinations

<Fctn-1> = Delete character.
<Fctn-2>,<Ctrl-G>,<Ctrl-B> = Insert.
<Ctrl-M>,<Ctrl-8> = New paragraph.
<Fctn-3> = Delete line.
<Fctn-8> = Insert line.
<Ctrl-1> = Oops.
<Ctrl-2> = Reformat.
<Ctrl-R> = Reformat + Right justify.
<Ctrl-K> = Clear to End Of Line.
<Ctrl-Y> = Release right or left margin.
<Ctrl-F> = Freeze screen below cursor.
Note: (Ctrl-F) draws a temporary line across the screen just below the cursor. The upper part of the screen may be scrolled while the lower part remains in place. Pressing (Ctrl-F) again removes the line.

<Ctrl-U>+<Ctrl-,> = IBM Chars. 128-159
<Ctrl-,> = IBM Chars. 160-255

Tab Key Functions

<Fctn-7>,<Ctrl-I> = Tab.
<Ctrl-7>,<Ctrl-W> = Word Tab.
<Ctrl-T> = Back Tab.

Note: To set Tabs press <Fctn-9>, then <T>, and then select 1,2 or 3. Complicated tab settings may be made in each of these numbers, which may then be selected from the command line. It is an easy way to reset the right margin. When finished press Enter.

Print File functions

First <Fctn-9> Command ESCape.

PF Print File to PIO, RS232.BA=4800 etc.

PIO Print complete file to PIO.

Variations of PF

m n PIO Print lines "m" through "n".
Note: "83 87 PIO" prints lines 83 through 87.

C PIO Strip hi bits + Ctrl Chars.
L PIO Print file with line numbers.
P PIO Send printer start codes.
Q PIO Send printer stop codes.
P Q PIO Send start and stop codes.

Print File to disk functions

First <Fctn-9> Command ESCape.

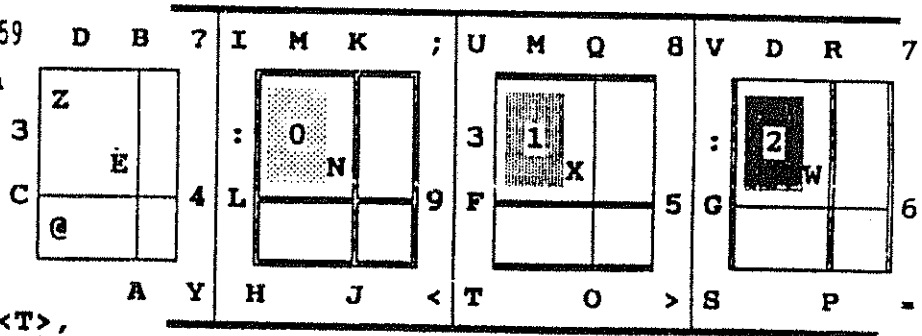
PF Print File.

DSKn.filename Print complete file to Disk.
Note: "n" is the disk number and filename is the name of file to be created on disk. Example: DSK2.TEXTONE

Variations of PF to disk

F DSKn.filename Print to disk as DisFix/80.
A DSKn.filename Append to existing file.
M DSKn.filename Create File as MS-Dos DF/128.
U DSKn.filename Create File as UNIX DF/128.

I typed this up for my own benefit, because I don't like switching to the help screens. I asked Harry to put it in the NorthCoast Newsletter in case some of you prefer a help printout to the FunnelWeb screens, as I do. This sheet is not complete and I may have made some mistakes, but it helps me as a quick reference for keystrokes like (Ctrl-V) and (Ctrl-R), which are among the new keystrokes in FunnelWeb 5.01. If it helps anyone, it was worth the effort. Good luck. Marty.



NorthCoast 99'ers
Cleveland, Ohio

What is a Database?

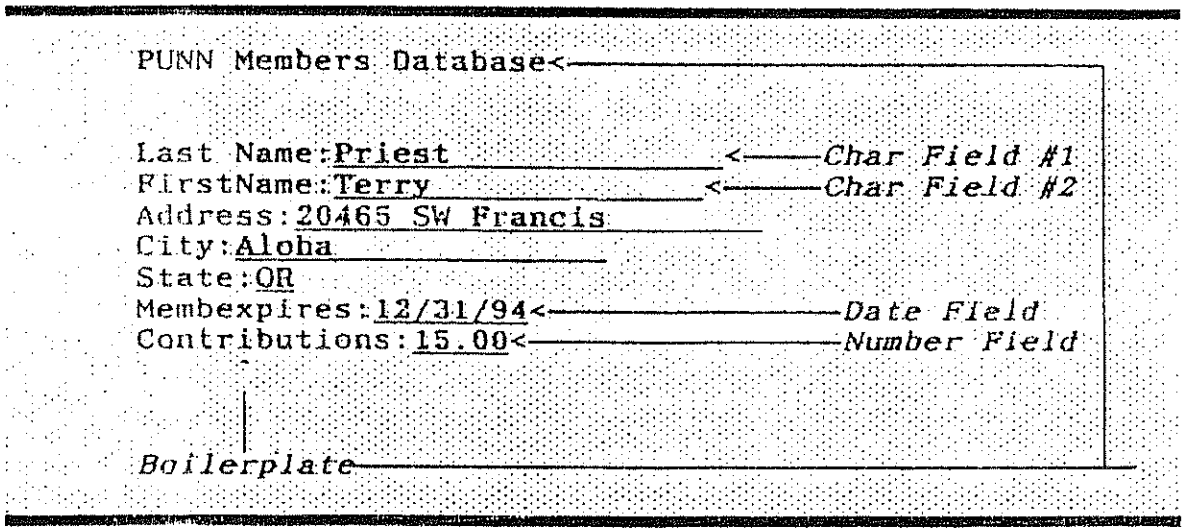
BY
TERRY PRIEST

Databases are part of our everyday lives. We use a few without really realizing it. One of the best examples is the phone book. It has all the parts--a collection of fields of data(last name,first name,address & phone number) which is the record of each subscriber and is bound together(a file) information is sorted two ways--alphabetical by user in the white pages and alphabetical categories in the yellow pages. Another familiar one to TI'ers is trusty DM1000. What's that you say--it's a disk manager. It is a disk manager too, but all of the file, housekeeping and disk functions are dependent on the database function. The disk catalog is a fine example of a data base--The fields are the columns (filename,size,type etc.) and the rows are the records since each row describes one file on the diskette. The whole thing is the file (database). You can even see the boilerplate. That is the graphic lines, column names and other information that is not on the disk catalog but is placed on the screen by the DM1000 program. The various actions the program can perform are the equivalent of database reports. A tabular report is a good way to visualize a database. The fields are the columns and the records are the rows. The column names and other text is the boilerplate.

Database programs cannot contain all the data in memory and have a reasonable amount of records. What they do is maintain indexes of data that resides on the diskette. It is first located and then reassembled for use by the program or display. The only exception is Personal Record Keeping Module. It puts all data in memory and saves program and data as program format file. Unfortunately this severely limits the number of records it can contain, especially since it does not use the 32K memory expansion.

Elements of a Database

A data base consists of fields,records and files. See the illustration below:



Each of the pages above is a RECORD.
The collection of pages is the FILE OR DATABASE.

Another way is the tabular report method:

LastName	FirstName	Address	City	St
Priest	Terry	20465 SW Francis	Aloha	OR<--*record #1*
Zeller	John	1415 Anywhere	Portland	MA<--*record #2*

Continued on page 1

Organizing Data

1).Decide what data is needed and break into fields.
2).Name the fields on paper and estimate length if characters or numbers.
3).Review fields to see if greater or lesser breakdown is needed.
4).If you have too many fields combine some or use a different program.
5).If a substantial number of records will have blank fields use relational database. If so use steps 1-5 to design the supporting database.
6).Enter the fields in an order that is logical to you.
7).If using PRK or PRBase be sure to leave an extra field for future expansion as the structure cannot be changed or records transferred between databases. Not necessary with TI-Base since records can be copied to another database,fields added or subtracted and rearranged while original data is intact.

Other Considerations

1).Databases have to be sorted on at least one field in order to operate. Resorting takes time--sort on the field most likely to be used first.
2).Use your database to select information for a TI-Writer mail merge. The formatter can write letters easier than the database.
3).If you will need a count of all or certain record use TI-Base
4).If you must select records based on a logical decision (if-then-else) or case use TI_Base.
5).When setting up the fields in the database enter them in an order that is easy to key in.
6).If you already have data on file use TI-Base. It can read text files (D/V 80) and place data in the file without you having to type it in. You must get the data in row and column format first. If the fields are longer than 80 cols, split it, read into 2 databases and then combine into one.
7).Dates:If you need to manipulate or calculate dates(days before,after,elapsed etc...) use TI-Base.
8).Be aware that numbers are not rounded, they are truncated to fit the field width and decimals allowed them. Errors can accumulate during multiplication or division.
9).Searches:PRK & PRBase can do searches with only part of the desired information but what you search for must match explicitly,ie,PRI would find PRICE & PRIEST. While PR E would not find PRICE OR PRIEST. TI-Base can "scan" the field for EST and would find ESTABLISHMENT and PRIEST in addition to being able to do the first search example.

Examples of Databases

In this case we have a roster for several different organizations that have most or many members in common. Some of the members have cellular phones in addition to a business and home number. The Computer Club has 55 members;Camera Club has 48 members;Ham Radio Club has 76 members. Of these 20 Computer Club members are also members of the Ham Radio Club and 10 are in Camera and Ham. Similar crossovers exist for the other clubs.

Continued on page 12

Types of Databases

There are two types of databases for the TI, relational and flat file. In a flat file format ALL information to be stored retrieved and manipulated must be on each record AND in the same file. Fields that may contain data in only a few cases are on every record occupy blank space in memory and slow processing by the computer. You cannot compare or combine data from different databases even if they have some information in common unless you manually print out and do it yourself. In addition you may be limited by the number of fields allowed on each record. In a relational database you can combine, extract, compare and what have you from different sets of data. This can allow you to have many more fields if you establish a link between them. Record sizes can be smaller if data is organized such that each databases's records contain fields that would be filled on most records. Data that would normally only relate to a few of the records in the main file is kept separately and linked to the origin. Keeping some things separate enables the computer to work faster and is much more efficient in the use of memory and disk space. Relational databases also allow one to record a script to store the instructions or procedures for future use.

Three Database Programs for TI's

1)Personal Record Keeping (PRK). Module based, does not need P-box, can use cassette or disk. Does not recognize 32K memory expansion.
2)PR Base. Requires Disk drive (2 recommended),32K,XB or EA5 loader. Uses the entire disk for data. Your program must be on separate diskette named PRBASE. The data disk cannot be read by any disk manager or other program.
3)TI Base. Requires Disk Drive,32K. Loads from XB,EA,Mini Memory, TI-Writer opt3. Data stored on diskettes in normal way. A relational type database, you can have 5 separate databases communicating at once.

Feature:	PRK	PRBase	TI Base
Type	Flatfile	Flatfile	Realtional
# of fields/record	15	17	17
Max Field Length chars	15	255 total of ALL fields	255
Number fields	Yes	No	Yes
Date fields	No	No	Yes
Math functions	Yes	No	Yes
Max # records	Varies, <100	350 SSSD 710 DSSD 1430 DSDD	16,000+
Storage	Cassette or Disk	Disk	Disk
Output Devices	Printer	Printer or Disk file	Printer or Disk file
Stored report formats	Two, fixed	User defined 5 report/ 2 Labels	User defined Unlimited
Flexibility	Low	Medium	High

FEEDBACK

Program errors create challenge

I enjoy your magazine very much, been getting it since 1986. I type in all of the programs, that way I can see how the programs are constructed and learn some programming. Once in a while a printing error makes getting the programs to run a challenge. In the February issue, I think I have found two errors. First, on page 28, line 40 belongs to the HIDE-64 program; can't have a program line after a subroutine. Also, HIDE-64 should have different line numbers. The way it is typed you would think it is all one program. Second error is on page 30, line 480 is not complete and lines 490-550 are missing.

Keep up the good work, yours is the only magazine we still have for the TI computer.

Harold Panzer
West Covina, California

You're correct about line 40. It should be the first line of HIDE-64, not the last line of FIND-64. The line numbering is the that of the programmer's, Don Steffen. We do not usually change line numbering.

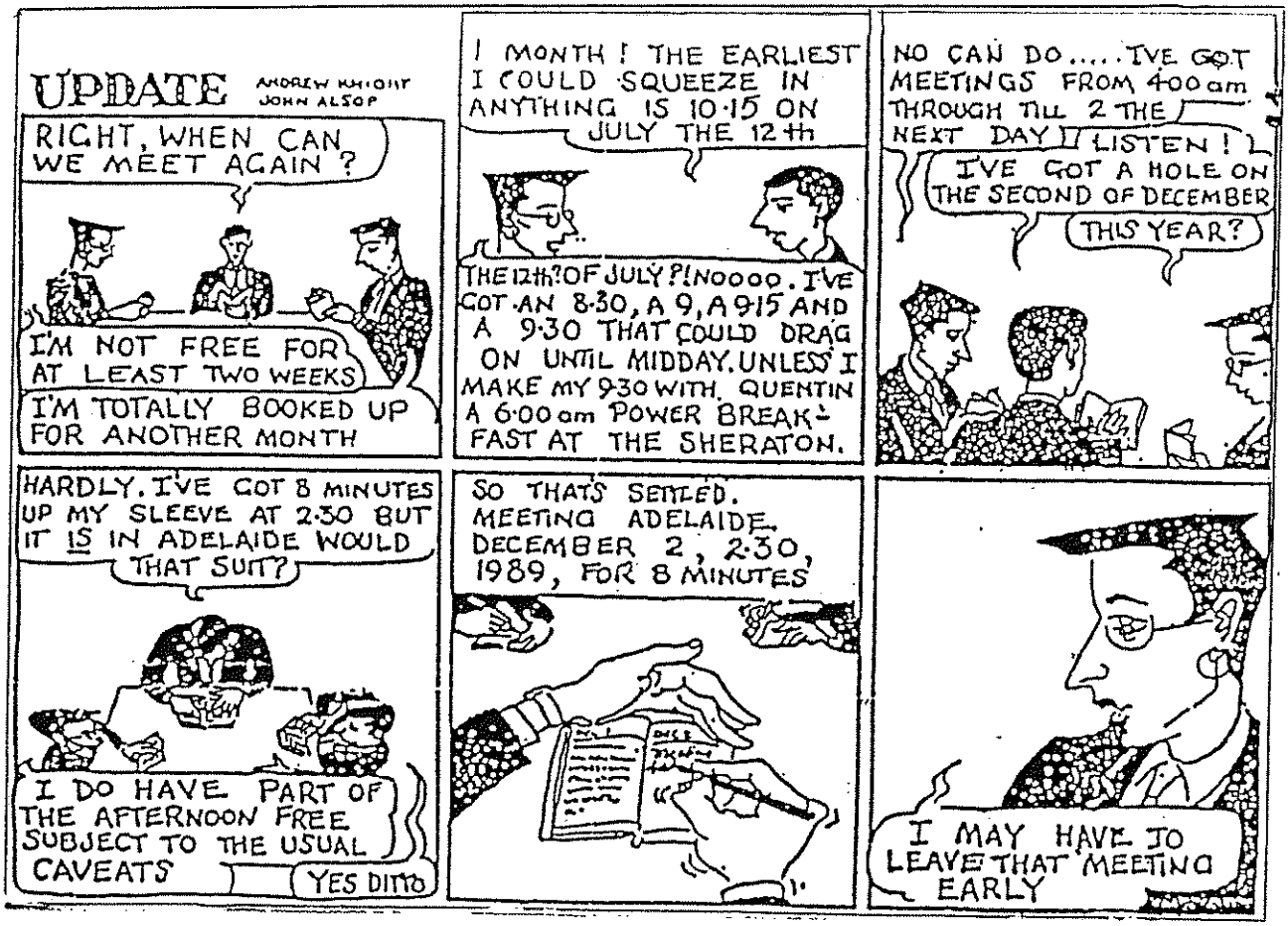
Good catch on APTITUDE. The apparent explanation for the missing lines is that line 550 was corrupted and when we trasferred the text file listing from the Geneve to the Mac, which is what we use to lay out MICROpendium, the glitch in 550 caused the lost of the previous lines. I went back to the original program, and line 550 is corrupt there. Here is line 550:

```
550 DISPLAY AT(9,8):"pr ss
 Y   Y" !236
```

All I can say about line 550 is that it didn't interfere with the program when we ran it. When we originally ran the program, we apparently never accessed line 550, which is why it loads and seems to run properly, at least for a while. The original program is named TCX-1129 in Jim Peterson's numbering system. Anyone with an uncorrupted version of this line is invited to provide it to us so that we can pass it on to our readers.—Ed.

```
480 CALL HCHAR(3,30,K+79)::
CALL COLOR(K-47,7,7):: DISPL
AY AT(6,24):CHR$(137)&CHR$(1
40)&CHR$(127)!014
490 CALL HCHAR(6,30,30)!252
500 FOR D=1 TO 10 :: NEXT D
:: CALL HCHAR(6,30,32):: CAL
L KEY(0,K2,ST):: IF (ST=0)+(
K2<49)+(K2>57)+(K2=K)THEN 49
0 !046
510 CALL HCHAR(6,30,K2+79)::
 CALL COLOR(K2-47,7,7):: IF
((K-48=M)*(K2-48=N))+((K-48=
N)*(K2-48=M))THEN 570 !039
520 IF (K=N)*(K2=M)THEN 570
!181
530 CALL SOUND(500,30000,30,
30000,30,400,30,-4,0):: CALL
 COLOR(K-47,2,2):: CALL COLO
R(K2-47,2,2):: FOR D=1 TO 50
0 !175
540 NEXT D :: CALL COLOR(M+1
,7,7):: CALL COLOR(N+1,7,7)!
103
```

Send your letters and comments to *MICROpendium Feedback*, P.O. Box 1343, Round Rock, TX 78680.



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SECRETARY - TIUP(INC.)

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