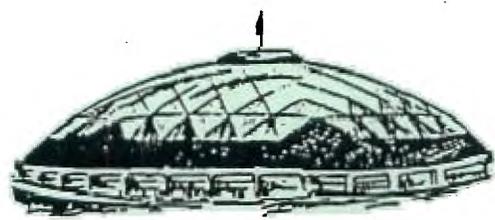


5503

(87)  
Tacoma



# THE TACOMA INFORMER

Published by The TACOMA 99ers USERS GROUP  
P.O. BOX 42983 -- TACOMA, WA 98442

Volume 5

MARCH 1988

No. 3

## From the Desk of the President...

On Feb. 5th there was a officers meeting to discuss a new budget. The budget for 1988 is:

- NEWSLETTER:.....\$ 65.00 per month
- LIBRARY:.....\$ 10.00 per month
- EQUIPMENT MISC.....\$100.00 per month

Note: If anyone knows of a way to cut the cost of printing of the newsletter please call me. 582-8886

In order to bring some more income without increasing dues we decided to have three swap-meets instead of two. They will be on Sat., May 21st, July 23rd and September 17th.

The annual 4-H Eastside fair will be on Sat., June 4th. If the Park District has one at all, as I talked to the Park District and they are not sure if they will have one this year. I will keep you posted on this fair.

There will be a recruitment drive on Sat., Apr. 23rd from 9:00 am to 4:00 pm at the meeting room. We will give away some fairware and sell disks, pop, etc. to make people aware of our club. Ron Prewitt is chairman of the committee. The committee members are Tom King, Alf Miller, Vern Schrottenboer and Frank Ashburn. If you would like to help contact one of these pople.

For those who were not at the Feb. 18th meeting Vern Schrottenboer will take over recruiting committee, Jim Smith will take over activities committee and Joe Nollan will take over education committee.

For the March 3rd meeting, Jim Smith has arranged for Cynthia Becker to come and give a demo on telecommunications.

Till Next Time  
Happy Computing  
Frank L. Ashburn

# Vice President Speaks

Instead of meeting in Jim's basement or the local library our group is blessed with excellent meeting facilities which are the direct result of our co-operation with the Parks Dept. We have access to these facilities because we volunteer our time staffing the Computer Room. For those not familiar with our Computer Room, it is a room in a Park Dept. building that is open to the public for some free computer exposure. The volunteers from our group set up six consoles and TV monitors for use each Saturday from Noon to 4PM. We have about 50 pieces of cartridge software available also. The program started with 3 consoles and 3 Black/White TVs but with donations and purchases from the group we have an additional 3 consoles and 3 Color TVs. I also want to give credit to Don Hudven for building the setup cubes making it easier for all of us and I plan to mount the power boxes in the cubes soon. In return for our efforts we get a secure room to store the equipment which includes the group's complete system. In addition we have a larger, carpeted room for our meetings. There is a certain amount of stability gained also because we always meet at the same place and time. I was elected Vice-President recently and I plan to continue to have the time to give personal help to anyone who needs it. For those who may have a problem or

question with a program the easiest way for me to solve it is for you to give me a copy of the program and a short note about the problem so that if I can't solve the problem on the spot I'll be able to take it home with me. Sometimes it is difficult to corner me for an answer at the meetings and it is also easier for me to see the problem firsthand. I thank our past US Presidents for seeing fit to provide the nice four day weekend in February. I used the time to complete the work on a LOAD SYSTEM UTILITY program package that will allow you to mix and match E/A-5 and X-Basic programs and build a single loader program for all of them. I have included a couple other programs to fill the disk. This is now available to anyone who gives me a SSSD disk and/or money for postage needed. I will demonstrate the program the first meeting in March and copies will be available for members. The bad news that I've noticed lately is the lack of new information in the newsletters and I will put the blame on all of us. I'm sure the Editors would rather include a new article than copy old news from another newsletter. I would like to see some new input but I don't like to see a newsletter filled up with a program listing. I would prefer to see a review of a program and a note that it is available in the Library. This will also prevent key-in mistakes. The

good news for the local members is that the work has begun on the parking lot. In the past the pot-holed road has been a race track for the hot-rodders. I saw a print of the new parking area and it will be real nice. The entrance will be moving about 200 feet to the West and will make a couple of curves as it approaches the Pool Building. The plan includes landscaping and irrigation. The construction (destruction so far) has put a temporary hold on the Computer Room activities. The DEMO for the last meeting in March will be how to use the machine language merging utility called SYSTEX and I will also show how to enter an assembly language program and assemble it. I am thinking about a tutorial on E/A basics and will proceed if there is any interest. I have used a number of neat programming ideas writing some programs and will be sharing them in the future. Please keep the questions and DEMO suggestions coming. In closing I will say that those of you who missed the first meeting in February missed a good one. Barbara Wiederhold of Queen Anne Computer showed the Geneve 9640 computer and it was quite impressive, but I also saw the new enclosure. It is an AT style enclosure with a 220 watt power supply and room for 3 half-height drives. The TI community will be hearing about this one and we saw it first!

Until next time. . . Joe

**THE COMPUTER ROOM  
NEEDS YOUR HELP**

**Sign up at the Next Meeting**

## *From the Library Desk. . .*

THERE HAVE BEEN LOTS OF VERY GOOD PROGRAMS COMING IN LATELY. NOT AS MUCH IN QUANTITY AS IN QUALITY. THANKS TO GENIE AND THE PEOPLE WHO WRITE AND UPGRADE PROGRAMS. FRANK AND I WERE TALKING YESTERDAY ABOUT HOW THE SOFTWARE HAS GONE UP IN BOTH QUALITY AND THE AMOUNT OF IT. WE BOTH REMEMBER HOW PLEASED MOST OF US WERE, WHEN WE COPIED A SIMPLE PROGRAM FROM A BOOK AND IT\_RAN!

SOME OF THE NEW ONES WE NOW HAVE ARE LISTED BELOW. I'VE ADDED COMMENTS ABOUT WHAT I KNOW ABOUT THEM. I'D LIKE TO NOTE THAT ALL OF THESE ARE FAREWARE. SO KEEP SUPPORTING THE PEOPLE THAT ARE WRITING THEM FOR US! SO FAR I'VE BEEN VERY IMPRESSED.

MENU\_MAKER AND JOE'S LOAD SYSTEM: I'VE BEEN AFTER JOE NOLLAN FOR A LONG TIME ON THIS ONE, BUT HE WAS NEVER SATISFIED. THE NICEST PROGRAM I'VE SEEN TO LET YOU MAKE YOUR OWN CUSTOMIZED DISK LOADERS. EVEN A TOTAL BLIVET LIKE MYSELF CAN FOLLOW THE DIRECTIONS ON THE SCREEN AND DO THE JOB! HE'S ADDED LOTS OF PRINTED DOCUMENTATION ALSO. IT'S OUTSTANDING!

CALENDAR/NOTEPAD: RON PREWITT HAS ALSO BEEN HARD AT WORK. HIS NEWEST IS THE SLICKEST ONE PAGE ANNUAL CALENDAR AND NOTEPAD I'VE SEEN. IT HAS NO DATES, EXCEPT THE ONES YOU PUT INTO IT WITH YOUR ACTIVITY SCHEDULE. YOU'LL SEE A SAMPLE OF IT IN OUR NEWS LETTER. YOU CAN SAVE IT, UPDATE IT OR CHANGE IT VERY EASILY AND EVEN MAKE ONE UP FOR OTHERS. AGAIN, I THINK IT'S OUTSTANDING.

BASIC\_BUILDER: WRITTEN BY PAOLO BAGNERESI, WHO WROTE THE WELL KNOWN BA-WRITER. IT WILL ALLOW YOU TO WRITE AN EXTENDED BASIC PROGRAM WITH THE BA-WRITER EDITOR. YOU WILL OBTAIN A RUNNABLE XB PROGRAM THAT CAN BE SAVED TO DISK. HERE AGAIN, LOTS OF DOCUMENTATION IS SUPPLIED. HAVEN'T TRIED IT.

BA-WRITER\_VERSION\_1.5: I DON'T KNOW WHAT OTHER IMPROVEMENTS, HE CAN MAKE ON THIS TRIED AND TRUE STANDBY. HE'S ADDED SOME BELLS AND WHISTLES THAT MAKE IT NICE TO USE. LOTS OF DOCUMENTATION, 33 PAGES TO BE EXACT. OUTSTANDING!

GRAPHICLABELER: WRITTEN BY STEVEN McWATTY AND MODIFIED BY R J BAILEY. ONE OF THE SLICKEST LABEL MAKERS I'VE SEEN. LETS YOU USE THE GRAPHICS OR MONOGRAM FILES FROM CSGD TO MAKE SOME REAL EFFECTIVE LABELS FOR YOUR DISKS OR EVEN YOUR PERSONAL PROPERTY. OUTSTANDING!

DM-1000\_VERSION\_4.0: ALL I CAN SAY HERE IS THAT HE'S MANAGED TO MAKE A GREAT PROGRAM EVEN BETTER. WELL WORTH ORDERING EVEN IF YOU ALREADY HAVE THE PREVIOUS VERSION.

ARCHIVER\_VERSION\_2.4: THIS PROGRAM HAS ADDED ENOUGH UTILITY PROGRAMS SO THAT YOU RARELY WOULD HAVE TO GO BACK TO YOUR FILE MANAGER. REALLY A FINE JOB!

PROGRAMS COMING ALONG WITH THIS QUALITY WILL INSURE THE LIFE OF OUR "ORPHAN". LET'S SUPPORT THESE PEOPLE!

BOB HAUN, 584-3938

# UPCOMING EVENTS

Tacoma 99ers User's Group  
1988 ACTIVITIES CALENDAR

JANUARY	FEBRUARY	MARCH	APRIL
7th 8pm Meeting	4th 8pm Meeting-Demonstration of the GENEVE by Barb Weiderhold	3rd 8pm Meeting-BBS demonstration by Cynthia Becker	7th 8pm Meeting
21st 8pm Meeting	18th 8pm Meeting- TI ARTIST Demonstration	17th 8pm Meeting	21st 8pm Meeting 23rd SOFTWARE GIVE-AWAY
MAY	JUNE	JULY	AUGUST
5th 8pm Meeting	2nd 8pm Meeting 4th 4-H EASTSIDE FAIR	7th 8pm Meeting	4th 8pm Meeting
19th 8pm Meeting 21st MIDWAY SWAP-MEET	16th 8pm Meeting	21st 8pm Meeting 23rd MIDWAY SWAP-MEET	18th 8pm Meeting
SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1st 8pm Meeting	6th 8pm Meeting	3rd 8pm Meeting	1st 8pm Meeting
15th 8pm Meeting 17th MIDWAY SWAP-MEET 24th SEATTLE TI FAIRE	20th 8pm Meeting	17th 8pm Meeting	15th 8pm Meeting

REVISED: 02/25/88

## DISCLAIMER

THE ARTICLES CONTAINED IN THIS NEWSLETTER DO NOT NECESSARILY REPRESENT THE OPINION OF THE GROUP, EDITOR, OR ANY PERSON OTHER THAN THE AUTHORS. THE TACOMA 99ERS USERS GROUP CANNOT ASSUME LIABILITY FOR ERRORS OR OMISSIONS IN ARTICLES, PROGRAMS OR ADVERTISEMENTS.

PERMISSION IS GRANTED TO COPY ARTICLES, PROVIDED THAT THE SOURCE OR SOURCES BE DISCLOSED AND PROPER CREDIT GIVEN TO THE AUTHORS.

```

*****
*****
*****      C A T A L O G I N G   L I B R A R Y      *****
*****
*****      Version 1.5.3   08/10/87                *****
*****
*****      A Trialware program by Marty Kroll Jr.   *****
*****
*****
*****

```

NEW FEATURES OF VERSION 1.5

\*\*\*\*\*

1. Global string search routines for disk and file names.
2. If disk to be added is already catalogued, you can type in replacement name for use in Catlib.
3. Merging of 2 or more smaller data files is now possible.
4. Faster sorting routines.
5. Catlib is now in program image format, providing faster loading and conserving disk space.
6. Includes an Extended Basic loader (compliments of RAG software).
7. Improved keyboard entry routines.
8. Ability to produce printouts in either 6 or 8 lines/inch format.
9. A much improved documentation file.

\*\*\*\*\*

FEATURES OF CATLIB

\*\*\*\*\*

- 1 Catalogs up to 123 disks 900 files on each set of data files.
- 2 Saves data for later listings, additions, or deletions.
- 3 Merge smaller data files into memory and resave as larger data file.
- 4 Fast search routines. Search for either full file or disk name, or search for a string within the file or disk name.
- 5 Works on single or multiple disk systems.
- 6 For single disk systems there is no need to continually switch disks until all deletions additons are made.
- 7 For multiple disk systems you can catalog a disk from any drive.
- 8 When adding disks, catalog is listed on the screen. You have the option of adding the disk or not.
- 9 When adding disks, you are informed if the diskname is already on file. If it is, you can either replace the old listing with the new (in the case of an update, etc.), or you can enter a temporary name for the disk to be used in the listing (As in case of a backup disk, etc).
- 10 Catalogs most all "funny sectorred" disks.
- 11 Eliminates all non-printable characters from file and disk names, replacing them with a period, since no legal name contains a period.  
This eliminates sending unwanted control codes to your printer
- 12 Print a standard format catalog of any disk on file in your library, including the funny sectorred disks.
- 13 Outputs the following to screen or printer:  
Summary of disks  
Complete listing of files  
Conventional catalog listing of any disk(s) on file.
- 14 Output complete catalog of all disks, disk by disk, either for all disks or selectively, to the printer.
- 15 Chose 1,2, or 3 columns for printer outputs.

```

*****
*****
*****          C A T A L O G I N G   L I B R A R Y          *****
*****
*****          C O M P A N I O N          *****
*****
*****          Version 1.0  02/20/88          *****
*****
*****          A Trialware program by Marty Kroll Jr.          *****
*****
*****          218 Kaplan Avenue  Pittsburgh, PA  15227          *****
*****
*****

```

OVERVIEW OF CATALOGING LIBRARY COMPANION

\*\*\*\*\*

CATALOGING LIBRARY COMPANION (CATCOM) is a specialized database, designed specifically for use in conjunction with the trialware disk cataloger program, Cataloging Library (Catlib). CATLIB COMPANION greatly enhances the usefulness and versatility of Cataloging Library. In fact, these two trialware programs combined form a complete disk cataloging system, both for the individual, and for the Users Group library.

CATLIB COMPANION uses the files produced by Cataloging Library (DISKDATAxx and FILEDATAxx), as the foundation for the database.

In addition to the essential information provided by the CATLIB files, you can now incorporate user-inputted information into the CATCOM database; a total of 64 characters of descriptive information for each file cataloged can be added!

FEATURES OF CATALOGING LIBRARY COMPANION

\*\*\*\*\*

- 1 For each file in your catalog, you can enter a 4-letter file extension, a 4-letter key word, a comment of 28 characters, and 28 characters of additional information. In all, you are able to enter 64 characters of descriptive information to help identify and operate the file.
- 2 This information can be added for each file, either file by file, or disk by disk.
- 3 You can search for full or partial file names or disk names, or search for a specific string in your inputted information, or you can select all listings in the catalog. Then, you can produce listings to either screen or printer.
- 4 If you update your CATLIB files, CATLIB COMPANION will automatically update your information files, keeping track of what user-inputted information goes with which file, and deleting information for deleted files. You can then enter commented information for the new files in your catalog.
- 5 CATLIB COMPANION also enables you to use your catalog to produce customized disk jackets, either for selected disks, or for the whole catalog. Yes, now, with assembly speed, you can make disk jackets for your whole disk library, with just a couple of keystrokes.
- 6 A detailed explanation is given on how to customize your CATCOM disk with a sector editor, personalizing it for your disk and printer setup.
- 7 A basic disk system is all that is required to run CATLIB COMPANION. A SSSD disk will hold all your additional comments for one CATCOM data file set.

# In the Row-Column Mode

By George Tilley

Reprinted from SNUGLETter -- October, 1987

No single perspective on computing can be all encompassing, but thinking and reasoning in the row/column mode comes close. Prime examples are spread-sheets, tables, charts, graphs, and also word processing although we don't usually perceive it that way.

Numerical expressions frequently convey a meaning in the row/column format that cannot be expressed any other way. Many times after studying the docs, I have put something in the row/column format and immediately got a big "A-HA". Just below there are four tables for the four arithmetic functions (+ - \* /) applied to a single byte. Don't expect an "A-HA" but you might find it interesting.

I used MULTIPLAN to format and print the tables.

The program for the Multiply(Hex) table follows. It can easily be modified to print-out the others. I've annotated the major changes inside braces(you won't need it).

```
300 DIM HX$(15,15) [DEC(15,15)]
310 FOR ROW=0 TO 15 :: FOR COL=0 TO 15 :: DEC=ROW*COL
    [for DEC goto 350] :: HHX=INT(DEC/16) :: LHX=DEC-(HHX)
320 IF HHX<10 THEN HHX$=STR$(HHX) ELSE HHX$=CHR$(HHX+55)
330 IF LHX<10 THEN LHX$=STR$(LHX) ELSE LHX$=CHR$(LHX+55)
340 HX$(ROW,COL)=HHX$&LHX$&" "
350 NEXT COL :: NEXT ROW
    !PRINT SECTION [Reformat for DEC]
400 OPEN #5:"PI0" :: PRINT #5:" ";
410 FOR C=0 TO 15
420 IF C<10 THEN C$=STR$(C)&" " ELSE C$=CHR$(C+55)&" "
430 PRINT #5:C$; :: NEXT C :: PRINT #5:" " : :
510 FOR R=0 TO 15
520 IF R<10 THEN R$=STR$(R) ELSE R$=CHR$(R+55)
530 PRINT #5, USING"K# -- ":R$; :: FOR C=0 TO 15 :: PRINT #5:HX$(R,C);
    ::NEXT C :: PRINT #5:" " :: NEXT R :: CLOSE #5
```

## CHARTS FOR ADD / SUBTRACT (decimal)

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0-	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2-	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
3-	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
4-	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
5-	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6-	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
7-	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
8-	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
9-	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
10-	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
11-	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
12-	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
13-	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
14-	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
15-	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

CHARTS FOR ADD / SUBTRACT (Hexadecimal)

	<00	<01	<02	<03	<04	<05	<06	<07	<08	<09	<0A	<0B	<0C	<0D	<0E	<0F
<00-<00	<01	<02	<03	<04	<05	<06	<07	<08	<09	<0A	<0B	<0C	<0D	<0E	<0F	
<01-<01	<02	<03	<04	<05	<06	<07	<08	<09	<0A	<0B	<0C	<0D	<0E	<0F	<10	
<02-<02	<03	<04	<05	<06	<07	<08	<09	<0A	<0B	<0C	<0D	<0E	<0F	<10	<11	
<03-<03	<04	<05	<06	<07	<08	<09	<0A	<0B	<0C	<0D	<0E	<0F	<10	<11	<12	
<04-<04	<05	<06	<07	<08	<09	<0A	<0B	<0C	<0D	<0E	<0F	<10	<11	<12	<13	
<05-<05	<06	<07	<08	<09	<0A	<0B	<0C	<0D	<0E	<0F	<10	<11	<12	<13	<14	
<06-<06	<07	<08	<09	<0A	<0B	<0C	<0D	<0E	<0F	<10	<11	<12	<13	<14	<15	
<07-<07	<08	<09	<0A	<0B	<0C	<0D	<0E	<0F	<10	<11	<12	<13	<14	<15	<16	
<08-<08	<09	<0A	<0B	<0C	<0D	<0E	<0F	<10	<11	<12	<13	<14	<15	<16	<17	
<09-<09	<0A	<0B	<0C	<0D	<0E	<0F	<10	<11	<12	<13	<14	<15	<16	<17	<18	
<0A-<0A	<0B	<0C	<0D	<0E	<0F	<10	<11	<12	<13	<14	<15	<16	<17	<18	<19	
<0B-<0B	<0C	<0D	<0E	<0F	<10	<11	<12	<13	<14	<15	<16	<17	<18	<19	<1A	
<0C-<0C	<0D	<0E	<0F	<10	<11	<12	<13	<14	<15	<16	<17	<18	<19	<1A	<1B	
<0D-<0D	<0E	<0F	<10	<11	<12	<13	<14	<15	<16	<17	<18	<19	<1A	<1B	<1C	
<0E-<0E	<0F	<10	<11	<12	<13	<14	<15	<16	<17	<18	<19	<1A	<1B	<1C	<1D	
<0F-<0F	<10	<11	<12	<13	<14	<15	<16	<17	<18	<19	<1A	<1B	<1C	<1D	<1E	

ADDITION : ROW# + COL# = SUM (intersect)  
 i.e. 11 [<0B] + 15 [<0F] = 26 [<1A ]  
 SUBTRACTION : intersect(minuend) - ROW#(subtrahend) = COL#(difference)  
 i.e. <18 [24] - <0E [14] = <0A [10]

CHARTS FOR MULTIPLY/DIVIDE(decimal)

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0-0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
2-0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	
3-0	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	
4-0	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	
5-0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	
6-0	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	
7-0	7	14	21	28	35	42	49	56	63	70	77	84	91	98	105	
8-0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	
9-0	9	18	27	36	45	54	63	72	81	90	99	108	117	126	135	
10-0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	
11-0	11	22	33	44	55	66	77	88	99	110	121	132	143	154	165	
12-0	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	
13-0	13	26	39	52	65	78	91	104	117	130	143	156	169	182	195	
14-0	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210	
15-0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	

CHARTS FOR MULTIPLY / DIVIDE (Hexadecimal)

	<00	<01	<02	<03	<04	<05	<06	<07	<08	<09	<0A	<0B	<0C	<0D	<0E	<0F
<00-<00	<00	<00	<00	<00	<00	<00	<00	<00	<00	<00	<00	<00	<00	<00	<00	<00
<01-<00	<01	<02	<03	<04	<05	<06	<07	<08	<09	<0A	<0B	<0C	<0D	<0E	<0F	
<02-<00	<02	<04	<06	<08	<0A	<0C	<0E	<10	<12	<14	<16	<18	<1A	<1C	<1E	
<03-<00	<03	<06	<09	<0C	<0F	<12	<15	<18	<1B	<1E	<21	<24	<27	<2A	<2D	

<04-<00 <04 <08 <0C <10 <14 <18 <1C <20 <24 <28 <2C <30 <34 <38 <3C  
 <05-<00 <05 <0A <0F <14 <19 <1E <23 <28 <2D <32 <37 <3C <41 <46 <4B  
 <06-<00 <06 <0C <12 <18 <1E <24 <2A <30 <36 <3C <42 <48 <4E <54 <5A  
 <07-<00 <07 <0E <15 <1C <23 <2A <31 <38 <3F <46 <4D <54 <5B <62 <69  
 <08-<00 <08 <10 <18 <20 <28 <30 <38 <40 <48 <50 <58 <60 <68 <70 <78  
 <09-<00 <09 <12 <1B <24 <2D <36 <3F <48 <51 <5A <63 <6C <75 <7E <87  
 <0A-<00 <0A <14 <1E <28 <32 <3C <46 <50 <5A <64 <6E <78 <82 <8C <96  
 <0B-<00 <0B <16 <21 <2C <37 <42 <4D <58 <63 <6E <79 <84 <8F <9A <A5  
 <0C-<00 <0C <18 <24 <30 <3C <48 <54 <60 <6C <78 <84 <98 <9C <A8 <B4  
 <0D-<00 <0D <1A <27 <34 <41 <4E <5B <68 <75 <82 <8F <9C <A9 <B6 <C3  
 <0E-<00 <0E <1C <2A <38 <46 <54 <62 <70 <7E <8C <9A <A8 <B6 <C4 <D2  
 <0F-<00 <0F <1E <2D <3C <4B <5A <69 <78 <87 <96 <A5 <B4 <C3 <D2 <E1

For Division :

If # not on table use the largest # that is smaller than the known:  
 i.e. 162 [KA2] / 12 [0C] = 13[0d] w/remainder of 6

Negative numbers and decimal fractions are in another category.

(Editor's Note: This article was keyboarded in for us by JEAN SCHMIDT. If anyone of you have an article that you find interesting and would like to share with everyone please give it to Art Daniels to be included in the newsletter. Thank you.)

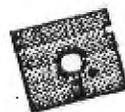
**TACOMA USERS  
 USERS GROUP**

**OFFICERS**

PRESIDENT  
 FRANK ASHBURN.....582-8886  
  
 VICE PRESIDENT  
 JOE NOLLAN.....572-4680  
  
 SECRETARY  
 LARRY HAWK.....564-3884  
  
 TREASURER  
 RON PREWITT.....474-7310  
  
 LIBRARIAN  
 BOB HAUN.....584-3938  
  
 EDITOR  
 ART DANIELS.....564-3434

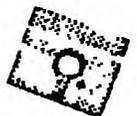
**Third Annual  
 TI-FAIR**

**Sept. 24th  
 Seattle Center**



**DISKS FOR SALE**

**See Ron Prewitt**



**50 cents each**

**or 25 for Ten Dollars**

TACOMA 99ERS  
 USERS GROUP  
 P.O. BOX 42583  
 Tacoma, WA 98442



**"WHAT IS FAIRWARE"**

Programmers who release their programs as FAIRWARE rely on distribution through Electronic Bulletin Boards (EBB's) and copying by individuals and User Groups. However, the FAIRWARE program authors depend on your honesty to send the requested remuneration for their efforts if you decide to keep and use the program.

Because of the relatively

small TI-99/4A user population, it could cost software authors more than they could sell their programs for if they commercially distributed their software. Also, because the FAIRWARE concept eliminates the commercial Marketing, Advertising and Distribution cost, the program user benefits by lower cost software. This doesn't mean low quality software! Some of the best TI-99/4A software is FAIRWARE and

rivals commercial software for other computers

If we want more and better programs for our computer, supporting the FAIRWARE authors is the best way of ensuring that software will continue to be written for the TI-99/4A and at a reasonable cost.

**"USER GROUP PROFILE"**

I finally had time to go through the current member-

ship sign-up sheets to compile a few statistics. The following is an equipment profile of our membership.

EQUIPMENT	MEMBERS
CASSETTE BASED	-- 4 (9%)
PEB BASED	-- 39 (91%)
PRINTERS	-- 35 (81%)
MODEMS	-- 19 (44%)
GENEVE 9640	-- 3 (7%)

HAPPY COMPUTING  
 Ron Previtt



**MEETINGS ~ 1st and 3rd THURS. ~ 8 p. m.**

South End Pool Building - 482 E. 56th Street - Tacoma, WA

For More information Call 474-7310