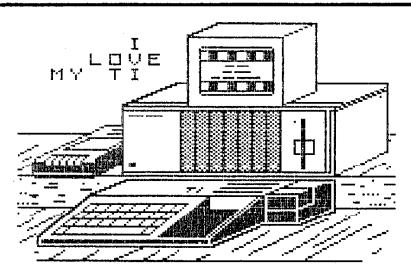
HUNTER VALLEY 99ERS USERS GROUP OME GOMPUTER DEWELETTER









OCTOBER 1988











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Members and non members are invited to contribute articles for publication in HV97 NEWS.

Any copy intended for publication may be typed, hand written, or submited on tape/disc media as files suitable for use with TI Writer (ie. DIS/FIX 80 or DIS/VAR 80). A suitable Public Domain word processor program will be supplied if required by the club librarian.

Please include along with your article sufficient information to enable the file to be read by the Editor eg. File Name etc. The preferred format is 35 columns and page length 66 lines, right justified.

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Articles for publication can be submitted to the Editor, ALL other club related correspondence should be addressed to The Secretary.

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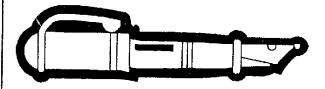
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PRESIDENT'S



with

Al Lawrence

September is the month of the QUEST RD200 RAMdisk which will be fully compatable with the Horizon board. The brief description given last month in the secretary's report must have been enough to tempt a lot of TI'ers in our area to order one as we have now have placed an initial order for 20 boards.

The club has the prototype board in one system and this was September's demo. If you missed the demo and would like to see it, come along and have a look. Any queries you have will also be answered.

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The fully socketed and tested board is a Christmas special, and may only apply to those who send their deposit to be included in the first release (expected before Xmas), as the next order may take time to fill and the offer or prices may vary.

If you wish you may buy only the bare board and shop around, buying the parts yourself to build your own RAMdisk as funds permit. Full instruction sheets are included and the board-only price will be approx. \$60.

Don't be disappointed (as time to our early December delivery is short) Get your order in A.S.A.P. so you will have the early Xmas present to expand and enhance the powers of your TI. If you ever thought moving from cassette to disk was good well this is even GREATER!!

I am co-ordinating this initial ordering to take some of the high pressure from our secretary's

overflowing mailbox, so you may contact me direct to order if you have not already done so.

FUNNELWEB V 4.10 thru 4.12 TIP.

SYSCON once configured to your system and SAVED on disk may be re-used to update later versions of F'web's LOAD, FW or UTIL1. This will save time, but in doing so one will miss the joys of using CONFIG. The choice is yours.

Afterplacing the required F'web files on your working copy CONFIG, press S, then disk, load press L to load Sysinfo (ie the SYSCON that has already customised), do a Ctrl C back entry screen and select Install and then proceed as directed. customise LOAD and F for FW or UTIL1. After both are finished do a Ctrl C and Quit. Reload and that's it.

Remember also if you have PIO as your printer name to alter MG/MH (DM-1000) as this will also need to be updated. After loading and pressing Fctn 3 to bring up printer defaults, adjust and save to disk. A newly added feature is MYARC sense Y/N.

As usual the FWDOC/REPT gives the latest BUG fixes & updates and it is a good idea to read this if you get a later Version than you have in current usage as sometimes not all files are affected. If in doubt the old is out and update the lot.

Just send rumours, requests, hints, tips and anything else you would like to see in print, mods to your favourite programs, workshops or social events you would like to see to the HUNTER VALLEY 99'ers EDITOR.

SECRETARYS REPORT



FROM ALBERT ANDERSON

This month has been fairly quiet on the mail-in department and since I was unable to make it to this months committee meeting, there isn't a great deal for me to report on this However I will push on with what I do have.

We have had no new membership renewals this month but have had an Ottawa group in Canada, wants to let enguiry from Keith Bryant in Corawa, NSW which is on the banks of the beautiful Murray River on NSW/Victorian border. It seems word of HV99 has filtered to Keith from our friends in the Melbourne group already produced some and we would be pleased to have you! join should you wish. Unfortunately at this stage Keith we do not have any other contacts for you in your area but you never know where people that use the 4A are going to pop up from.

From the TISHUG group in Sydney comes word that they are having FULL another one of their DAY tutorials on Saturday 5th November which is the day before the HV99 BASH. Although I have never been to one of these tutorial days I believe they have everything going for the right there before your eyes. 4A user. I hope to be in touch with write one voice at a time, but the someone month and will try and get more! information on it as well as trying! to arrange for a few of us to attend the day. If anyone is interested in such a visit please let me know. Maybe we can take some maps down to show them where the start of the

BASH is at Speers Point Pool on the Sunday!!

From the "black hole" up in Grawin, NSW Run Kleinschafer has been at it again! He has sent us a support program for the HV99 **EPROM** PROGRAMMER that was detailed in the AUGUST 1987 HV99 Newsletter. It is called S.E.P. and stands for Super Eprom Programmer. This is a hefty up-date on the original software and allowance has been made for 32K Supercart users. has also Ron up-dated the QED Loader program for the 32K Supercart and provided quite detailed text files for programs. These programs are on disk and in the software library... just ask John if you have need for Thanks a lot Ron for these works. By the way the name of the program, S.E.P. caused a little delay in passing on to the software library due to my interpretation of which to me is "Someone S.E.P. Else's Problem". We were just lucky that I shoved it in the drive to have a look at it before I put it in a return mailer.... how about another name for S.E.P., Ron???

From overseas, Lucie Dorais of the us know that there is a (in Lucie's words) "fantastic" new music program T199/4A about to be the for the released. The program author i S none other than David Caron who has marvellous works for us 99'ers. I do not know much about music so I will repeat what Lucie has written so that the music buffs can have an insight into the MUSIC-PRO as it will probably end up being named.

"... to enter a note, you just press a key: the TI keyboard is like a piano. No need to go and pick the right note in the margin, you just "play" the note then its duration is chosen by the length of time you leave your finger on the key... from one sixteenth to whole note from TISHUG during this notes do not have to be equal, only the total duration of the piece: for ex., you can have the melody in half all the harmony in notes, and wholes, the second voice file will be much smaller, but the "compiler" portion of the program, which plays all the voices together will

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Hopefully the MUSIC-PRO will released soon, however at this stage it is not known if it will be released **FAIRWARE** as or as a COMMERCIAL item. Thanks to Lucie for letting us know of it and thanks to David Caron for your continued input and support community.

Peter Gleed from Melbourne has been in touch and tells me that has has brought back from the USA quite a few TMS9900 Processor chips and TMS9901 I/O chips. Those needing such chips for console repairs etc. could contact Peter on 03-8774790. The TMS9900 cost is approx. \$10 and the 9901 is approx \$7 (plus postage).

Before I finish I have a request to put forward to our readers from a few of us HV77'ers who not only compute but take part in an outdoor sport come mental torture called GOLF. Does anyone know of any GOLF HANDICAPPING programs for the TI99/4A, particularly for the Stroke and Stableford scoring systems?? If not this might provide some food for thought for the hackers...

Well I'm down to the tin tacks, so that it for October '88...bye now

Albert Anderson (4a4me)

RELEASE INFORMATION

Ram Disk is peripheral card designed to be used in the 99/4 Peripheral Expansion System. It was developed from the concept of the HORIZON Ram Disk. design is functionally compatible with the Horizon, with exception that a full 512 Kbytes, rather than 188 Kbytes is available for disk operations. In addition to the 512K of disk RAM there is 8K of DSR RAM and provision for an optional 32K Expansion.

Improvements over the Horizon Ram Disk are gained by using 1980's intergrated circuit technology and digital techniques, allowing the board to be constructed without the use of the dubious technique of 'piggy backing' electronics.

Up to three QED Ram Dsiks can be installed in the system with the first intended to replace the existing memory expansion card. The Ram Disk portion of the card is designed to have from 32 to 512K of battery backed memory.

The QED Ram Disk can be selected to respond to CRU bases of >1000. This should allow it to be fitted to all present system configurations.

See the President's column on page 1 for details of ordering the board through the HV99ers.

- SUNDAY, 6th NOVEMBER -

NOT A RACE but an enjoyable drive, with clues and questions.

Meet at SPEERS POINT OLYMPIC POOL CAR PARK

1st car to leave at 9.30am

At the destination you will be able to enjoy the bush, a bar-b-que & genuine bush toilets. A short bush walk is available to a picturesque spot, so be prepared!!

Entry fee is \$2 per car, and you will be competing for VALUABLE PRIZES!!

Come along, bring the family, your own food and drink & of course, bush gear.

Jennie and Tim Watkins

ITS FUTURE IS In your hands!!

Over the past few months input from Our members has declined remarkably - you have to look no that this issue of OUR newsletter to see that the articles appearing are provided by the same willing few. Without their contribution there would be NOTHING AT ALL to print this month.

A couple of months ago in the newsletter I appealed for ideas for articles, asking what YOU wanted to read in YOUR newsletter. To date THERE HAS BEEN ONLY ONE RESPONSE!! Is anyone out there?? Does anyone actually read the newsletter?

If each member was to write just ONE ARTICLE A YEAR, I would have enough material to publish a 40 PAGE NEWSLETTER EVERY MONTH!! Imagine the impact that would have regarding the spreading of knowledge throughout TI community!

YOUR NEWSLETTER could be 'padded out' with articles copied from other newsletters we receive. Is that what you want? I don't know because no-one responded to my previous plea.

Each year we try to make our Christmas issue something a bit special - a bumper issue for want of a better term. How about contributing something for that? You will not only earn my undying gratitude but, who knows, you may get to like the idea of contributing something for the general good.

Please don't feel that you must have the intellectual capacity of a fony McGovern or the dry wit of a Ron Kleinschafer - anything will do on any subject you feel others may have some interest - please keep them clean though - well reasonably clean. Don't worry about spelling or grammar, that's what the Editor is for.

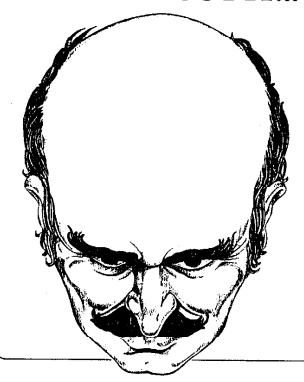
If you are interested in maintaining the high standard of YOUR newsletter, please give some thought to contributing something. Remember, it doesn't have to be an in-depth intellectual-type treatise on the innards of the microchip - games reviews, tips and hints, questions, favourite games/utilities & why, how to play xxx, anything at all about our beloved 99/4A.

PLEASE don't let the newsletter die through lack of interest. I would be out of a Committee job (and you know how long the queue is for one of those jobs!). Most of all our Group would lose a valuable means of exchanging ideas, both within the Group and through the world wide TI fraternaty.

Brian Woods, Editor, HV 99ers Newsletter



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IN THE NEWS



A POT POURRI OF LOCAL AND INTERNATIONAL NEWS COMPILED BY

joe wright

Hello again, it has been a balmy Wednesday here in Valentine, the temperature has been up to Зi celcius during the day. A summer storm has just passed through and now at 8:00 pm it is a beautiful clear cool evening. One of those evenings when you really feel to be a part of the cosmos. Who knows? Maybe that is mans destiny in some future era.

Anyway back on earth-

FRIENDSHIP
As simple as daylight,
as honest as the youngest child.

Friendship when offered, if nothing more than this.

Will surely be accepted, as a truly great gift.

So, be sure of your motives, when you offer it around.

Or like some stricken ship, you could well run aground.

I couldn't find a well known quote to fit the purpose this month so I made that up!! GAMES, GAMES, GAMES.

I have been looking around of late at games which are available for the TI. There are some very good ones available. Below are some I have seen recently and my comments.

Barrage.

This is a game I have seen machines in games arcades. You have two missile launchers, one in each bottom corner of the screen. Bombs fall from above and you have direct missiles to explode the bombs before they reach ground and destroy the planes, tanks, trucks etc that you are defending. This game definitly in my top 10 games. can operate from joy stick keyboard. Requires disc and 32k and good eye hand reaction to advance through the programme.

DIABLO.

This I fear is one of the forgotten games for the TI. It is a programme written here in Australia by Manual Contantinidis of TISHUG. It is an EXCELLENT strategy game. You are required to direct a moving ball through tubes like paths around the screen. When you first start the game it may seem slow, DON'T be fooled it is very challenging. Requires extended basic. This is also in my top 10.

TI TENNIS.

Here is another of my top 10 games. It has very good graphics. You have the option to either play the computer or and opponent. Two joysticks are needed for two you want to players, one if try yourself against the computer. You can play forehand, backhand, smash, service soft or hard and many other features. It also has speech. Almost "just like tennis" on your monitor.

JUMPY.

Another game with really good graphics. A series of raised pylons appear on screen. You are required to JUMP your man around the pylons to removed markers on each. all sounds easy enough, except that you also have to avoid the jumping beasty which devours you if you are not quick enough. Requires 32 k and disc. A new series of pylons with I have not yet each new screen. seen them all. This game is similar to NORBERT.

KNIGHTS TOUR.

This game is written in basic and is in my top 10. The game entails you moving a KNIGHT around a chess board until the knight has been on each square once only. This is not easy and for our chess players should be a challenge to much to resist.

After you have given up the computer can be asked to how you just how easy it is!!

OTHELLO.

Just about every TI owner would have played Othello on their TI at some time or another. Runs in basic. You have to take as many squares as possible the on board, you accomplish this by selecting square positions to out manouver the Hint try to get the corners.

YAHTZEE.

Another game in basic, and the whole family can play it. Presentation and screen displays are very good. The writer has included compliance to the rules of Yathzee as part If you have a Yahtzee the game. rule bender in the household then you need this game urgently. This is another game often over looked in the quest for bigger and better!!

ENGINEER.

Here is another game in extended basic which will run on the console only. Graphics are fair, and operation is not quick. However has some this game interesting features, firstly it is different, secondly it is not impossible to ********** complete the game and you do have to Steve Mahr writing in the L.A Topics apply yourself to complete the game. I like it!!

OTHERS.

Others which fit into my top 11 are, MOON MINE, MAJOR TOM, ACTURUS.

ADVENTURES.

You will have noticed that I have not included any adventures in my Jiffy Flyer Well that i s because I consider adventures not to be games but hard work. But without doubt my garage door handles, or see tacked selection HIKER.

MORE MODULES.

Listed below the prices are Education modules as advertised by TEX-COMP in a recent Micropendium.

PHM	3ØØZ	EARLY LEARNING FUN4.95
PHM	3003	BEGINNING GRAMMAR4.95
PHM	3Ø1Ø	PHYSICAL FITNESS4.95
PHM	7777	MUSIC MAKER
PHM	3Ø21	WEIGHT CONT/NUTR10.95
PHM	31Ø9	TI LOGO (32K RQD) .19.95
PHM	3Ø15	EARLY READ syn rqd9.95
PHM	3943	READING FUN9.95
PHM	3046	READING ON9.95
PHM	3Ø47	READING ROUNDUP9.95
PHM	3 ø4 8	READING RALLY9.95
PHM	3Ø82	READING FLIGHT9.95
PHM	3Ø27	ADD SUBT 19.95
PHM	3Ø28	ADD SUBT II9.95
PHM	3Ø29	MULTIPLICATION9.95
PHM	3Ø49	DIVISION9.95
PHM	3Ø5Ø	NUMERATION I9.95
PHM	3Ø51	NUMERATION II9.95

THE NEXT THREE MODULES REQUIRED THE SPEECH SYNTHERSIZER.

PHM 3060 SCHOLASTIC SPELLING 4- 9.95 PHM 3061 SCHOLASTIC SPELLING 5- 9.95 PHM 3062 SCHOLASTIC SPELLING 6- 9.95

PHM 3Ø91 MILLIKEN SUBTRACTION .9.95 PHM 3Ø92 MILLIKEN MULTI/TION ..9.95 PHM 3Ø93 MILLIKEN DIVISION9.95 PHM 3Ø94 MILLIKEN INTERGERS ...9.95 PHM 3Ø98 M/KEN NUMB READINESS .4.95 PHM 3Ø99 M/KEN LAWS ARITHMETIC.4.95 PHM 3100 MILLIKEN EQUATIONS ...4.95 PHM 31Ø1 M/KEN MEASUREMENT OF FORMULAS · · · · · · · · · · · 4 . 95 PHM 3114 ALLIGATOR MIX.....6.95 PHM 3115 ALIEN ADDITION6.95 PHM 3119 METEOR MULTIPLICATION. 6.95 MINUS MISSION6.95 PHM 3118

STORY MACHINE9,95

JIFFY FLYER.

PHM 3177

PHM 3178

mentions a new programme from Roger Merritt.

"His latest, Jiffy Flyer, opens up a whole new graphics arena. Simply stated, Jiffy Flyer is to flyers as 99 is to certificates. Certificate , 99 Certificate i = great producing horizontal certificates. produces flyers, just like what you would find on your windshield, front door, as the best is HITCH up below the stop sign. With Jiffy Flyer you can easily create flyers for garage sales, lost kittens (sob), house for sale, pets for sale, Commodore 64 for sale (hee hee), religious announcements, etc. Another quality graphics utility

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with many, many features including border and font selection (included), graphic selection (included and CSGD compatible), full screen text entry, save to and load from disk, select graphic from disk catalog, and print option. As you can see, Jiffy Flyer fills the gap between producing certificates and flyers, which is the concept the programme was designed around and excels at. Rodger, you've done it again! To order please send US\$10.00 to:

> Rodger Merritt 1949 Evergreen Avenue Fullerton, Ca 92635 U.S.A.

WHAT ARE TI DOING??

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Bayou Byte June 1988 has a report on the 1988 Dallas TI faire. I have taken some sections of that report and reproduced them below.

"Probably the most impressive item displayed was enthusiasm! No my friend, this was no wake for a dead computer but a celebration of a young 5 year old just hitting it's stride."

"The Hotel's Terrace area had scheduled meetings that covered items of interest as; Using Latest version of Funnelweb by Marty McCain; Using the Horizon Ram Disk Bud Mills; Overview of Management by Richard Fleetwood, and กอพ the main event; TEXAS INSTRUMENTS, Now and in the Jeffery Crump of the TI Consumer Relations Department in these were interesting but the big news came from Jeffery Crump. As he said "I'm here to squash tell you what rumours and ai I/T going to do and what they are NOT going to do" So on with the rumour bashing:

(1) TI IS COMING OUT WITH A NEW HOME COMPUTER THAT IS 99/4A COMPATIBLE. FALSE!! Noway Jose! Mr.Crump said prior to coming down to Dallas, he called every division and none are working on a new computer for the market, compatible or non-compatible with the 99/4A. He stated that TI still had a financial "bad taste" in their mouth from the 9/4A production. However they did have many new commercial computers to offer and were even providing OEM parts to other computer companies.

(2) TI IS DROPPING THEIR SUPPORT FOR THE T199/4A.

FALSE! He said that one thing TI definitely is strong on is support of it's products! However, economics affect them just like any other major corporation. He said that they were going to drop their toll free line due to the great cost per month but would still maintain direct lines for consumer service.

That wraps up a rather quiet month.

Joe Wright.

LOOKING FOR

SEE OUR SOFTWARE LIBRARIAN



HE WONT BITE YOU! !

Box of 10 disks	.\$iØ			
Postage for 1 box of disks	.\$2.ØØ			
Postage for 1 disk	.\$Ø.8Ø			
Disk postage container\$0.60				
To copy a disk PER MASTER				
For a disk with software				

EXTRA CHARGES FOR SPECIALY MADE UP DISKS

Cassettes with software\$3.00

POSTAGE COSTS APPLY TO ADDRESSES WITHIN AUSTRALIA

RANDOM BYTES

from BOB CARMANY

Not everyone is as gifted Assembly Language programmer as is Tony McGovern. That especially includes me! As a result, I have tried to find ways to get around the ۵f creating my own Assembly Language programs whenever I could. For a while, MICROpendium and other magazines printed straight object code files in their pages. There are also object code files in the A/L manual as well. That's fine but, generally, you need the source code to begin with so that you can assemble it into object code that will run. Well, if the object code is printed in a magazine or manual, you can copy it with F'WEB or TI-Writer. The only problem is that they create a D/W 80 file and object code must be a D/F 80 file to I reasoned that there had to be a way to take advantage of these already-written object code files. The result was an MB program to do the conversion for me. The object code is simply copied with F'WEB and saved without any control characters (ie. (CR), etc.). \ When you are through copying the object code, choose (P)rint(F)ile and then type in C DSMx.FILENAME. The program will be saved without control Then use the following program to convert the D/V 80 file into D/F 80 object code ready to run.

100 REM ** COLUMN CONVERTER**

11Ø REM ***R. CARMANY 1982***

12¢ CALL CLEAP; DISPLAY AT (2,5); *8¢ COLUMN CONVERTER*: DISPLAY AT (5,1); *THIS PROGRAM WILL CONVERT A*: *DIS/VAR 8¢ TEXT FILE TO A*

130 DISPLAY AT(7,1):"DIS/FIX 80 FIL F." :: FOR DELAY=1 TO 3000 :: NEXT DELAY:: CALL CLEAR 14Ø INPUT "FILE TO CONVERT ": TEXT\$

15Ø INPUT "FILE TO CREATE ": OBJT#

16Ø OPEN #2:OBJT#, DISPLAY , FIXED 8Ø

170 OPEN #1:TEXT#,DISPLAY ,VARIABLE 80

18Ø LINPUT #1:A#

190 PRINT #2:A#

200 PRINT A

21Ø IF EOF(1) THEN 23Ø

22Ø GOTO 18Ø

23Ø CLOSE #2

24Ø CLOSE #1

25Ø END

Here is some GPLLNK data that might be of interest to you as well:

Decimal	Hex	Fctn
22	>1 6	8 Pixel Caps
24	>18	7 Pixel Caps
32	>2Ø	Master screen
52	>34	Beep
54	>36	Honk
62	>3D	Cassette DSP
74	>4A	6 Pixel Tiny Caps

That is about as far into Tony's area of expertise as I care to go at this particular time.

Here are a couple more SALL LOADs before I go on to something else.

CALL LOAD (-31884, x)

Change the keyboard mode (x=0 to 5)

CALL LOAD (-31880,x)

Random number generator (x=0 to 99) Requires the use of RANDOMIZE.

CALL LOAD (-32187)

Ø line number.

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One thing that I have found over the İΈ that your computer equipment can benefit from a little preventive maintainance. If you are having sporadic lockups and your cartridges don't seem to want to work at times, the culprit the Grom port in the probably I have found that the best console, way to clean it is to take the console apart (the Grom port comes off and the protective hood comes off as well). I use Radio Shack (Tandy) Cleaner Degreaser (part no. 64-2322). I'm sure that you can get a similar product in Australia. only ingredient is:

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Trichlorotrifluoroethane

I have found that it doesn't remove as much metal from the contacts as some of the other products that I have tried. Use a cotton bud to apply it to the contacts of both the Grom port and the cartridges that you have. 90% of the lockup problems that you have can be cured by cleaning your cartridge contacts and Grom port from time to time.

This has continued on longer than I had expected and I want to leave a few things for next month's column.

We will get back to some Forth next month and there will be some more tips and tricks as well.

By the way, if you have any ideas or suggestions for topics to cover in this column, feel free to write to me: Bob Garmany, 1504 Larson St., Greensboro, N.C. 27407, USA



COME ON AUSSIE COME ON



COMMENT from Ron Kleinschafer

After recent correspondence with an overseas writer of a Fairware program that seems to be used resonably frequently, I was suprised by the reply to a request of mine for info on that particular program, I will quote the relevent part of that reply:

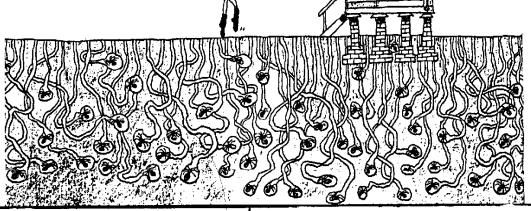
Quote: "I WOULD BE WILLING TO SEND THE SOURCE EXCEPT THAT TO DATE. ARE THE ONLY PERSON IN AUSTRALIA TO HAVE PAID FOR IT. BASICALLY THOSE USING IT IN AUSTRALIA WOULD PAY FOR IT I'D BE MORE THAN HAPPY TO SOURCE, PROVIDE THE (I'M NOT EXPECTING HUGE NUMBERS OF PEOPLE BUT WOULD CERTAINLY EXPECT MORE THAN ONE PERSON). " Unquote.

The Faiware author did go on to say that exchange with other Fairware authors in Australia for their material had been made, which was fair enough!!

How about if fella's, I realise that writing Fairware programs is not very rewarding at the best of times but has 02 gone into limbo ???

Ron Kleinschafer.

FUNNELWEB FARM PRESENTS



ASSEMBLY SQUEEZING PART 4 TONY McGOVERN

A second form of string that is sometimes found doesn't use a leading length indicator byte or word, but uses a null byte to mark the end of the string. This means that the string can be of any length but can't contain any null bytes as part of the string. Once again we look at the problem of moving a string from one known address to another.

LI RØ,STR1 LI R1,STR1 LOOP MOVB *RØ+,*R1+ JNE LOOP

You can see why this form of string is used as the bytes moved set the termination condition as they are moved, and a separate countdown isn't needed. The code above takes only 6 words and uses 2 registers, but it is possible to do better still by using indexed addressing again.

SETO R1
LOOP INC R1
MOVB @STR1(R1),@STR2(R1)
JNE LOOP

The SETO initializes the index so that on the first pass through

the loop the first byte is moved. This still uses 6 words but now trashes only one register. In either case the null byte is the last to be transferred and does not have to be attended to separately.

While we are at it, suppose we were reading in a definite number of bytes, say from GROM, and wanted to terminate them by a null byte to make this kind of string in CPU RAM.

LOOP MOVB @GRMRD, *R1+
DEC R2
JGT LOOP
MOVB @NULL, *R1

NULL is the label of a null data byte. You can save a word by replacing the last instruction with

SB #R1, #R1

Subtraction of a byte from itself is a handy way to clear a single byte as the CLR instruction works on full words only. In this instance

MOVB R2, #R1

also do the job as the would condition leaves loop exit containing a null word. From the point of view of someone trying and that includes read the code, yourself at a later date, previous form is preferable as it makes what is being done_ more obvious.

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EPROMMER REVISITED

by

RON/KLEINSCHAFER

After given twelve months of using the Eprom Programmer, the design of which was published in this Newsletter 1987, in August decision was taken that the software was in dire need of overhaul, the main reason being that a lot of work was required to manipulate Eprom data, either in memory or on disk, and the support software 425 difficult to use. One thing that was stated in the original article on the unit was "it can copy/program any Eprom for ANY device", this turned out to be more prophetic than at first thought.

As an example lets digress a little! Technology is slowly spreading its tentacles even out into the "bush" first came the telephone then came Post Office boxes. Don't laugh mate! that's technology at its best! years of having ones mail thrown into a forty four gallon drum with one end cut out and strapped, in the best tradition of repairs in these whereabouts, by lashing the forty four gallon drum to a couple of posts with A grade fencing wire! When you wanted to get your mail you simply sorted through the drum to find any that may belong to yourself, hoping that the wind didn't pick up and cause you to send up calling up a small muster to return any windborne envelopes to the drum. WHAT has all this got to do with Eprommers you ask? Just a moment mate, I'm getting there.

It seems that almost gone are the days when you wanted to power some nice appliance like a TI-994a or some useless object like an electric drill, you walked to wherever your generator was located, checked the oil, checked the fuel, got out the crank handle and swung the black smoke belching beast over until IT gave up and fired or YOU gave up and returned later for another bout with the mechanical marvel. Let me tell you that inroads are being made on an old tradition of hearing some

miner in his gen-shed giving the generator lessons in English the likes of which you can learn - only a LITTLE though - by listening to wharfies and other persons that have the reputation of knowing the true undercurrent language of Australia.

These traditional pastimes are slowly being replaced by the above mentioned technology whereby now all one has to do is "flick the switch". Now this doesn't mean that electric power lines have been bought into the area, instead manufacturers of the old hand cranked diesels have had their heads turned by, WAIT for it!! ELECTRONICS!!

What happens now is that when you "flick the switch" there is a little black box down on the generator that has a Processor IC and other bits and pieces that gets kicked life and the first mnenonics in its tiny brain must be, GHEEEZ WANTED, GET TO WORK!, and work it it checks the battery for does, adequate power, trips some relays and solenoids, initiates a start cycle for the motor, checks oil pressure; ambient air temperature; keeps an eye on the power starting to be developed into the wiring and if all goes OK lets the motor start and kicks the generator into full output. This is known as the "start After this has been cycle time". it doesn't go to sleep accomplished but keeps a constant vigil on all of the machine, including parts power being used, any signs of earth leakage, 1rop in oil pressure, excessive temperature etc. If it to COMes the conclusion that something is wrong it turns the whole contraption off; switches on some little red lights and waits for you to go down and teach it some more English!!

Things would be fine EXCEPT man had to have a finger in the pie and provide for that little hard working processor some instructions on how to behave. These instructions in another one of the black box's bits and pieces & is called an EPROM: Now this is where things go wrong; all the bits and pieces are OK but the stuff that has been put in that Eproms little cells has disease commonly known as BUGS, this is similar to AIDS except that it can be cured and it cannot contaminate another Eprom no matter

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So what's wrong with that you say? Just get another cured Eprom from the manufacturer/ That would be OK if, A:- you can convince them that there is a Bug; B: - if so convinced getting them to post one straight away and C:- lif the Cobb and Co coach doesn't break an axle or wheel getting. The here. main Bug encountered is \during "start the cycle time" where enough time is not given for the motor to settle down and build up oil pressure before the processor, after switching off the excess fuel start solenoid, starts checking the oil pressure. This Bug sometimes would not manifest itself until the geneet had done Some considerable work after being The information about commissioned. the code for the time delay was at freely least gi∨en Ьγ the manufacturers and turned out to be a simple time delay loop in the code of approx 20 seconds duration and was not quite enough & had to be increased to 30 seconds minimum piece of cake! EXCEPT that the 1000 was sometimes located at a different Address as updates to the rode was made, (different versions? maybe started out 1.0 and ended up with the latest somewhere near 4,12 EHH?), Anyway time came, 3.5 stated earlier, that the software for the Eprommer needed overhaul to be able to locate and correct these problems easily. This has been done & new software is available and is named S.E.P.

USING S.E.P (Super Eprom Programmer

Below is a short description of the new software and its use. If you have built one of the Eprommers then this software is available from the HVOP Library. The program combines many features that are only found in some of the more expensive units for other computers PLUS some additional features that are not available with those other units.

There are four files on the disk, these being EPROM, EPRON, CONVERT*XB, DOC/EPROM.

The main program EPROM has two and cannot be loaded with E/A option screens; the first being used to 5 or any other usual loader. Unlike Load files, Save Eprom's code to the Mechatronics Eprommer it does Disk, Enter S'BUG6, Enter the Eprom not fill up disk space with useless Program, or Quit.

The loader will load any Program Image or Data file to the memory address οf >CØØØ. Because the Eprommer can only program one 8P file at any pass this address was chosen as the Eprommers "working" or buffer area. The loader gets the filename and its LEMSTH UNLY then force loads it to this address. After loading the length of the file is displayed so that a note can be made to reduce programming time, The Eprom program uses the Address space of >A@@@ thru >B200 and it incorporates all stand alone routines (no external REFS) so that all other memory is available for This means that if you wish to use. edit code in memory you can step into S'BUG6, move the file to say >2000 then if you stuff up the code in the Eprommers "work" area you can go back to S'BUG6 and reshift the original code back and have another

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The file EPRON is Superbug's. This has been slightly modified for with the EPROM file, by using an E/A Supercart (or any other cartridge with an 8K Pam installed) on the Eprommer, SBUG'6 is loaded into the memory space >6000 and is instantly available from the Program at ANY time, Eprommer This gives the user greater power to inspect or edit Eprom programs, and replaces the tedium of trying to edit files on disk. Even if the file is not 9900 code but you know what you want to find then the F (find string) option can be used (this Was used to locate the aforementioned delay time loop code). With 9900 co1e that powerfull option οf S'BUG, H A 12 Disassemble, can be used to great advantage, along with single stepping through code for other editing purposes, in general having SBUG available at any time is what makes the program so versatile.

The Save Eprom's file option has another useful feature of saving ONLY the actual code itself. Ιt will be saved with the usual 6 byte E/A Program file header and Can easily be inspected with a disk sector editor; but it is a DATA file and cannot be loaded with E/A option 5 or any other usual loader. Unlike not fill up disk space with useless zeros. It will save files of from

one byte in length to a maximum of N2400 bytes, this length being specified in the main Eprom program by the user. The way to find its length and save it is a simple exercise.

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Select the Enter Eprommer option of the program (this actually does all the work on the Eprome); set up an 8K address parameter, >0000 then >EØØØ, <R:>ad the Eprom, <@>uit to S'BUG6, the first Ecreen. enter "M" command inspect the using the length of the file (say it ends at >D800), exit back to the Eprommer and enter the address parameters of then NDSØ1 (add a byte), >0*@@@* <Q>uit back to the first screen then the file. SAVO It is given a standard program image file 6 byte headen but will be gaved as a DATA File with a length of >1800 and can be reloaded at any time by the loader. Although this sounds long complicated it is a simple process and doesn't take very long, the length is always displayed after loading. There are error routines in the program that check for valid address parameters (you can't save a file backwards), also an Eprom must be <R>ead before the file can be saved, key inputs are checked for validity such as HEX for the addragsas and upper Case for filenames etc.

The Eprom program will (R)ead Eproms code; <E>resure test (after erasing an Eprom with UV light), <9>erify programmed Eprome, (P)rogram Eprome, key "B" (B)ack will halt programming i f a decision to abort is taken: This key also returns you to the top the screen so that new address parameters can be keyed in. You can also specify what address in the Eprom you wish to start programming at, great for adding Branch routines after editing the original code. When programming an Eprom it takes about 7 minutes to "burn" an 8K file because of the 50 millisecond pulse required to "burn" each byte. Faster programming speeds could be achieved with the software but at the expense of using up more memory space: Although this seems to be unimportant being only able ta program one 8K file at any pass but when users wish to collate parts of from several files different it soon becomes apparent programs that memory is valuable when trying to stach the files as they are being

loaded, the Eprom program uses the Addresses >A&&& thru >B&&& and must be left alone. After an Eprom is programmed the screen will display that the task is finished.

On the first Menu Screen an option Quit is available & it recommended that this exit be taken 50 that the console and Grom pointers be reset. As well any open files will be closed, otherwise it MAY require turning off the whole system to regain proper control. that key is accidentally pressed the user has the option of returning to the program with no loss of data.

On the distribution disk is named CONVERTAXB. This is a small XB program that can be used for assembly programs that may be written for unusual addresses; such as >4000 and after assembly normally the file cannot be loaded, \mathbf{B}_{Σ} running the program CONVERTAXE the file will be saved back to disk with the load address parameters that the user gives it, suggest >COOO. changes the load addresses and at the same time alters the CHECKSUM TAGS actual but the code is The file will then load unaltered. with Option 3 of E/A to >C@@@ then the Eprommer can be loaded Eprom programmed. To use CONVERTEXB the file MUST Þ€ uncompressed and is best done on a fresh disk so that any files are not fractured.

Other details of the program are on disk under the filename DOC/EPROM & it is recommended that it be read and understood before use. Further reading recommended is in the TISHUG news Digest September 1988 (page 23), an article by Ben Takach giving a lot information on Eproms which handy reference when dealing Eproms with AIDS.

What's AIDS you ask?, simple its A-bsence of I-nformation of D-ata or S-yntax!

The program SUPERBUG II is a Fairware program and you are reminded to honor that principal,

Ron Kleinschafer, HV99ers.



..IMPACT-99., T.I. Happenings by Jack Sughrue Box 459 E Douglas MA 01516

ADVENTURING

Marathons of the Mind

From tiny little word puzzles called riddles to elaborate puzzles called aystery novels there is really great intellectual growth. This growth is nurtured by fun; the fun of solving puzzles.

In recent years problem-solving puzzles written or developed on massive scales have become the intellectual pastime for a large number of young and old people throughout the world.

On the one hand such brainstorming, role-playing activities as the Bungeon and Bragon style puzzle/games have become extremely popular. These situation games require intense researching and reading skills which are only now beginning to astound teachers. How is it possible that a child who can't read SEE PUFF RUM, can not only read very technical books on mythology but apply that learning to problem—solving situations?

On the other hand we have - computers! - the greatest friend a teacher (particular those of us harried by fragmentation) ever had.

Besides being electronic flashcards and word-processors and educational development tools (i.e., Beginning Grammar, Reading Rally, Dragonmix, Logo II, et al), the computer can serve as an excellent reading/writing/problem-solving tool. This tool gets students involved. This tool is known, jargon-wise, as interactive fiction. But, to the novice, it is simply identified as text adventures: No graphics except those in the mind.

Most educators who have been using these games in the classrooms with any regularity have agreed that different approaches to the game (henceforth known as the adventure) are varied and effective. Most teachers prefer a group of three to five youngsters on the adventure at one time and that there should be almost no teacher intervention once the programs have been explained and the classroom structure has been established.

A good place to start for most computers would be Scott Adam's ADVENTURES. Pirate Adventure (the text version) is probably best to start with. With our 99/4A, of course, we might even start with simpler adventures like FOUR VEDAS which aren't available for other computers. Others in that series include NINER 49er, FUNHOUSE, HAUNTED HOUSE, and STONE AGE.

Once the game is loaded there is a certain structure usually followed by most adventure programmers: At the

top of the screen the scene is described in a manner similar to this: You are in a small dark room. There is a square patch of light in the distance. Shrill, high-pitched noises can be heard above your head.

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Directions: S N U

Then there is a flashing cursor.

The players must decide what to do. They all assume the role of the one character. Everything is perceived from that person's perspective.

Now the character may be directed to go Up or South or West or take an INVentory or LIGHT CANDLE (only if he/she has one and matches to light it with) and LOOK ROOM. (Most commands, as you can see, are given in abbreviated form in adventures. This helps the game move faster. Usually commands require only the first or the first three letters: W or INV. To perform specific actions (or reactions) usually requires a two-word situation: verb/noun. CLIMB TREE, GO HOUSE, PICK NOSE, TAKE KNIFE, EAT SOUP.

Very high-level games, such as those created by Infocom, allow you to write complex multiple commands in sentence form. Some of their games (the 10RK series, Hitchhiker's Guide to the Galaxy, Suspended) may take adults months. Although they are marvelous they probably mould not be suited to classroom use. (Many elementary school children, alone or with their families DO these incredible adventures.)

Meanwhile, back in the classroom, if you have one or two computers going with adventures, you will note an enthusiastic brainstorming at a very profound level. This is an exciting thing to watch. This kind of experience can be easily translated into other kinds of reading, writing, problem-solving, brainstorming experiences.

Depending on the amount of time you allow a group to participate will depend on how many days it takes to complete the adventure. It is an unusually rewarding experience for the youngsters and one which motivates the next group ready to start their adventure (the same or another; it doesn't matter). A beautiful side effect is the sharing that goes on.

There may be individuals who can attempt a solo adventure for some good educational reason, too. The children will volunteer to work on the program during lunch and recess.

Adventuring turns on kids. And it's impossible to keep a turned-on kid from learning. (An excellent classroom environment is provided for computer-use also.)

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There are other kinds of adventuring, too. The D&D-style slash & hack appeals to most youngsters. There are two that stand out for the TI: TUNNELS OF DOOM and the extraordinary one, LEGENDS. TOD is superb because you can get TOD Editor, which lets you create your own adventures; and LEGENDS is great because it is, simply, the best of the S&H adventures around. The graphics are superb, the options are excellent, the potential for growth is built in, and the "real world" geography is unmatched by any other similar game.

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Now, for your own adventuring. There are an incredible number of adventures for the II, depending upon what one considers an adventure.

If it's an all-text thing, then Tunnels of Doom and the great LEBENDS would not be. Thus, some adventures have graphics. But are all-text programs adventures? If so, one would have to include ELIZA (which all but seven people in the world have played) as an adventure. It certainly is an adventure of the mind, though no goals are set and no end results. Maybe psychological wanderings shouldn't be adventures.

Do adventures have to take place in the Middle Ages (or pseudo Middle Ages)? If so, then some of the very best adventures from INFOCOM (Hitchhiker's Guide to the Galaxy, Suspended, Witness, etc.) wouldn't be. But are. One Tunnels of Doom game takes place in K-Mart.

What then are adventures? Well, I think they must allow the user to make decisions that can change the course of the game. That's 1: player decisions. I think there has to be reactions to those decisions that are logical (even in a nonsensical fantasy a certain kind of logic must exist). I think there has to be a pre-determined (early in the game) mission. A goal. There has to be a set of tasks successfully completed to reach that goal. There has to be punishment of some kind for failure (or failure to take risks). There must be reward for achievement of the goal.

Basically, that's it. But there's still a problem. If you have Art Auction or Car Dealer or Lemonade or Sone Fishing or any number of small programs like these that have you make decisions (usually built upon other decisions), most of the above would apply: text, decision making, reaction to decision, goals (to achieve so much money or fish), punishment (bankruptcy or drowning), reward for successful achievement. Most throw in a thwarting agent, too. (Storm in Sone Fishing, other bidders in Art Auction, rain in Lemonade.

So are these adventures? Certainly more than ELIZA (which I consider a form of adventure), but they are not what many adventure players consider adventures.

There must be more - er - exotic environments; space, jungles, funhouse, battlefields (Watch it! The game Civil Nar might be considered an adventure.), Monderland); exotic times (the 30's, prehistoric times, the future); exotic characters (pirates, bugblatter beasts, K-Mart customers); exotic situations (saving the world, getting a cup of tea, understanding a computer poet, finding treasure).

Which brings us to the mazes which are adventures (Zork being the most famous) and mazes (Cat and Mouse) which are not; treasures which are adventure goals (Dungeons) from treasures which are goals but not adventures (Blackbeard's Treasure).

The criteria for "true" adventures, if there is such a thing, is vast and not always something which people agree on.

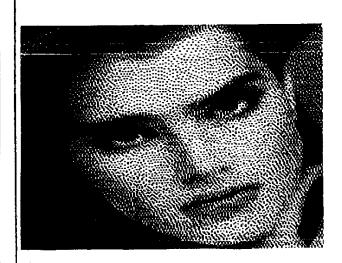
All this, as you probably figured, is leading up to something.

Mickey Schmitt, the world's leading expert on TI Adventuring, is putting together for publication the ENTIRE adventure world on the TI. Every adventure ever written for the TI - Commercial, Fairware, and Public Domain. This is a vast undertaking.

If any readers have any Fairware or Public Domain adventures, please gather them on a disk or two (preferably with a TI WRITER file to go along with it, giving the title, whether it requires the XB, ADVENTURE MODULE, TUNNELS OF DOOM, E/A, or just plain BASIC), and a short description [in case I have the game under a different title or want to categorize them by theme! and mail them to me. I will see that Mickey gets them. I will also send you back an equivalent number of disks with suitable PD and/or Fairware games for your efforts in this monumental task.

Games released by Scott Adams, Asgard, Infocom, Steve Davis, A.S.B.& E., Donn Granros are all copyrighted materials and may not be copied and sent. They have been purchased for this compilation.

[Jack Sughrue, Box 459, E. Douglas MA 01516]





LIVING WITH SPIDERS

PART 1

Ьy

TONY McGOVERN

What does it take to coexist infamous Atrax Robustus, with the the funnelweb spider? Mainly needs a certain amount of discretion about walking out in the yard at night in bare feet, care in gardening, and remember always to shake out your rubber boots before putting them on. Less seriously though what we want to do here is give a workthrough on how to write assembly programs ta live in spiderland. The Funnelweb system I can be categorized as something between a new operating system for the TI-99 and a shell for what already exists there in various forms. II was trying to sell lots of cartridges and either didn't care to tie it all together at the user level, or even took definite steps to prevent it. The expanded TI-99 lasted so well since system has Orphan Day 5 years ago because it was thoroughly engineered behind the scenes, and outside programmers have been able to draw on this underlying The Funnelweb system is strenath. an attempt to gather those strengths in a form convenient for the general user Perhaps the heading on the XB LOAD program ٥f "Utility Environment" sums it up best.

Whatever you call it though, it provide improved user convenience for programs written to normal rules. If you further respect its own internal rules, just as you would do with the DOS on any other system, then better programs still can be written. The Funnelweb package contains several utility programs which do just this, some usable only with Funnelweb, and some which can run freestanding. This article is intended to give guidance on writing dual-mode programs which can function with or without FWB. Two examples are the DM-1000 files MG/MG and Linehunter LH which will be used as a detailed example in the Vn 4.12 update.

The requirements for dual-mode

programs are that they

- (1) Observe FWB style
- (2) Know the load path
- (3) Don't tread on Atrax R.
- (4) Make a graceful exit

Let's look at these in more detail. The first item is nat essential but is nice to have. A good example to follow is the way FWB has in its turn followed the TI-Writer Editor in making (ctrl-C) an alternative to (fctn-9) for BACK or (escape). Once using (ctrl-C) has become familiar, (fctn-9) seems like the imposition of an awkward stretch. A FWB convention to save more awkward stretching is to use <ctrl-A> as alternative to <fctn-6> for PROCEED. Think of A for Action as mnemonic.

The next hurdle is for the program to know whether it has been loaded from FWB so that it can call on details or routines from FWB. What sort of details? One is to know what the screen colors were so that these can be retained and a jarring transition to a standard color set avoided. that FWB gives Remember great flexibility for you to choose your favorite colors of the moment. Another is to know what drive the program was loaded from, and if complete reload of FWB is needed, to know where FWB was lurking also. The nature οf a dual-mode application means that the special FWB information will be used only at entry and exit, the main exception here being the availability of QD from (fctn-7) AID as a "hot key" consistent with normal FWB usage as per item #1.

Next we want to avoid conflict with FWB, or if this is unavoidable to know how to restore FWB before exit. The primary requirement is for FWB itself to remain unmolested. This means that the program must leave the top 5K or so of hi-mem alone, more precisely from >EBC8 to >FFD7. The UL file resides at >E9BØ when it is in memory and is allowed a length of >210 bytes. FWB does not define XOP 1 but the E/A manual cautions that this i S not necessarily available all On. consoles in any event. If QD is to be called then this extends down to

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>CEØØ to cover QD and its RAM buffers. QD also keeps various information buffers in VDP on a temporary basis during use which might affect your program. VDP is used from >17FE through >19FF and >2B70 through >3359. QD's memory usage may seem strange but remember that it has to live with XB LOAD, FWB itself, and the Assembler and Formatter too. The final area of memory that needs to be preserved is the FWB "mailbox" from >AØØØ tØ >AØ4F which is used to preserve and transfer the DV/80 Workfile name. For program files this is most easily handled by AORGing your code suitably. XML addresses at >2000, >2002, and >8300 may be used with various modules and may need to be preserved depending on the details of your exit code. FWB programs always follows TI-Writer practice and preserve the contentd of >8300.

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A dual-mode program will most likely be an E/A Option 5 Run Program File or its FWB equivalent, Loaders Option 2 GPL Environment, which does not assume E/A utilities are present. As an alternative it could be a DF/80 Object File for Load Run, but we'll discuss the program file format here.

The code examples will be drawn from Linehunter so that they reflect an actual working program.

The extracts, with nonessential minor changes, from the LH source which follow cover a number of complexities which may not always be found. The chief of these is that FWB, E/A, and QD work in Graphics mode while LH is in Text mode. Some of the details are of course specific to LH.

* Funnelweb system equates

QDLEN EQU >A4Ø MLBOX EQU >AØØØ QDPOS EQU >CEØØ QDSAV EQU >FF2Ø QDLOAD EQU >FF3C QDXFL EQU >FF52 CMSRET EQU >FF5C FWREGS EQU >FF7C LDR11 EQU >FF9C

* Loader entry point

AORG >AØ5Ø

B @START

* Data block

MAINWS BSS >20
SAURET DATA Ø
QDFL DATA Ø
FWEB DATA Ø
VDPR7 DATA >F487
DSID TEXT 'DS'
K TEXT 'K.'

B2Ø BYTE >2Ø AID BYTE >Ø1 EVEN

¥

* Real entry

START LIMI Ø

MOV R11,@SAVRET
C R11,@LDR11
JNE NOFWEB

SETO @FWEB LWPI MAINWS MOV @QDSAV,@QDFL JNE STARU

MGV @QDLOAD,R1
BL *R1
DATA 'QD'
DATA QDPOS,QDLEN
JMP STARU
SETO @QDFL
MOV @QDFL,@QDXFL

LI R9,>380 BL @VAD MOVB @VDPRD,@VDPR7 BL @LOADNB

* Continue all paths

NOFWEB EQU \$

STARU

First thing to note is that the code is AORGed above the mailbox area, and the first word is an executable instruction as required by generic program file loaders. Here it branches to the real start of the program. Just to be sure we off interrupts, and the interrupt hook should also be cleared as you can't guarantee that all loader programs clear this properly, though if you have to clear the hook, it is probably too This isn't necessary for E/A or FWB. The next thing to do is to save the return address in R11. This is not strictly necessary if your final return doesn't use it,

but here we do in order to cover as many exit paths as possible. Now we determine if the program was loaded from FWB. The FWB program file loaders always hand over with R11 loaded with the re-entry address also stored as a data item at LDR11 This is good enough to tell FWB from anything else, such as an E/A load while the FWB code is still all or partly in memory. Ιf the comparison fails the FWEB flag is left at its load time initialized reset state, and the code jumps to the common continuation at NOFWEB. If it is FWB, the flag is set, and the program's own register set loaded. At this stage no registers have been written to, so even if the program had been loaded as FWB Opt 3 with workspace at >20BA and had loaded over that, it would still function correctly.

When FWB loads a program it has no way of knowing if the QD code has been overwritten, so it always resets its internal QD flag at QDXFL (>FF52), but preserves it at QDSAV (>FF20) just in case the program loaded can use the information. flag is saved and tested. If not null then QD was already loaded and we can jump to the next item. If null then we try to load it using the special utility file loader in FWB (used for things like QD, EA, UL, LL etc). A pointer to this routine is stored at QDLOAD (>FF3C) and it requires as inline data the 2 letter filename, the CPU load address, and the file length. This routine looks on both the primary secondary FWB drives before giving up. The 6 bytes worth of file header details are ignored and the code is not executed as in a normal loader. The following JMP is the error return, and here it just steps over setting the QDFL flag. At label STARU the flag is returned to FWB so that if QD was already loaded or has been reloaded, then FWB knows it immediately on return and doesn't bother to reload QD if it is summoned.

Now the FWB color is read. This particular program happens not to have an explicit VSBR utility, so the first byte of the color table in normal E/A position is read and stored for use in setting text mode later, and for rewriting the E/A color table on final exit. Non-FWB loads will use the default value.

This little bit of code helps give that seamless effect which we have been trying to achieve in the FWB system software.

The final subroutine call to LOADNB checks the mailbox and loads a valid name into various file name buffers. The actual code is further on. It checks that "DSK" and "." are there and if so transfers a block containing the name into various buffers. The drive number itself is not checked, and the form RD. for Myarc RAMdisks has not been explicitly catered for, but could Length easily be added. byte derivation is done elsewhere in this particular program. The exact details are up to you.

* Key returned in RØ * AID call for QD

CB RØ,@AID
JNE NXKEY

ABS @QDFL JEQ NXKEY

BL @DPREP STWP RØ BL @GDPOS BL @RESUME JMP WARM

NXKEY CB RØ,....

This next piece of code is the call sequence for QD disk directory. The key routine has returned the key value in RØ with Keyscan 5 assumed. If QDFL is not set then the QD code is ignored. The next routine DPREP, code listed later, is necessary only to set up graphics mode for QD because LH is in text mode. routine would not be necessary in a graphics mode program but if sprites are defined it would be necessary to shut them off and restore them on return. QD saves and restores the graphics screen >Ø->2FF itself but more is needed for text screens. Sprites are shut off, graphics mode set, and the E/A color rewritten. The next instruction STWP RØ is a special one for QD. to render harmless an action set up for some special load paths. Then BL to the QD code at QDPOS ()CEØØ). QD does not interfere with the caller's workspace. The RESUME routine restores the full text mode screen, mode, resets text and in this application writes the marked

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EX:

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FWI FWI

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ked

filename into the buffers. After return it branches where needed. * Exits EXIT ABS **@FWEB** JNE **FWEX** BL **@CLRSCR** BL **@EXITEA** LWPI GPLWS MOV @SAVRET,R11 @>6A * FWB exit path FWEX LI R1,>5Ø FWEXØ5 MOVB @B2Ø,@MLBOX-1(R1) DEC R1 JGT FWEXØ5 R1,25 LI FWEX10 MOVB @FIL2-1(R1),@MLBOX-1(R1) DEC R1 JGT FWEX1Ø LWPI FWREGS MOV @CMSRET,R11 SETO R13 SETO R4

This code excerpt shows the exits. If the FWEB flag is not set then it executes a normal return. There are enough different loaders around now which do not handle standard exits gracefully that the simplest thing might just be title screen. return to the The first instructions set graphics mode again to make the return to E/A look smoother. The FWB return first sets the FWB workspace, and to leave fetches the central menu screen return, and does some housekeeping in the funnelweb's burrow. R13 is necessary and reminds FWB that it was a utility load and not a return from the Editor for example. SETO of R4 flags the E/A side of the Central Menu screens and CLR of R4 would re-enter on the TI-Wr side.

RT

The other code before the exit writes spaces in the mailbox out to >A050, and then returns a filename from a buffer. In this case the filename is already padded out with spaces, otherwise the length byte FWB remains in memory. would be used. Again, this is article specific to this particular program, reloading FWB when you know your and you would write code to suit code will destroy FWB in memory. your own.

* VDP address set VAD EQU SWPB R9 VAE MOVB R9.@VDPWA SWPB R9 MOVB R9, @VDPWA RT * Directory prepare DPREP EQU \$ BLWP GVMBRD DATA >300, HIBUF, >100 EXITEA MOV R11,R1Ø LI RØ, >DØØØ BLWP @VFILL DATA >300,1 R9. >EØ81 MOVB R9,@>83D4 @VAE MOVB @VDPR7, RØ BLWP @VFILL DATA >38Ø, >2Ø *R1Ø * Resume after QD RESUME EQU MOV R11,R1Ø BLWP @VMBWD DATA >300, HIBUF, >100 LI R9, >FØ81 MOVB R9,@>83D4 BL @VAE BL **@LOADNB** R *R1Ø * Load filename buffers LOADNB EQU С @MLBOX,@DSID JNE NOFN CB @MLBOX+2,@K JNE NOEN CB @MLBOX+4,@K+1 JNE NOFN LI R1,25 BOXNM MOVB @MLBOX-1(R1),@FIL1-1(R1) MOVB @MLBOX-1(R1),@FIL2-1(R1) DEC R1 BOXNM JNE NOFN RT

This has been an example where The next will look at code for

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