THE BOSTON COMPUTER SOCIETY

TI 99/4A USER GROUP

NEWSLETTER

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September, 1991

LISTEN

by
Justin Dowling

The TI99/4A was orphaned in October, 1983, almost 8 years ago, and new developments are still crowding out the planned content of this newsletter. Funnelweb, version 4.4 has just been released.

We planned to conclude, this month, the third part of the articles on communications. In the July issue, if you will recall, we published the first two parts of a three part series entitled TAKING THE BUZZ OUT OF BUZZWORDS.

Apparently, the campaign orchestrated by the Lima group and by Jack Sughrue to send PD donations and appeals to Funnelweb Farm succeeded. After announcing his plans to follow his son Will into the Amiga world, Tony McGovern just released version 4.4 of Funnelweb. Inside there's an article by Charles Good from the Lima group. In it, he discusses the new features of this version, and how you can get a copy.

When this home computer was only in the orphanage about 5 years, Peter Hoddie suggested that the constant Funnelweb updates were getting a bit redundant and tiresome. Oh, he didn't use those words, but he was probably right: how many new things could somebody make this computer do?

Gram devices were just the start of something new. Along came 80 column devices. And it seems the updates to Funnelweb that keep apace of these hardware innovations don't seem so tiresome.

In addition to Charles Good's article on V4.4 of Funnelweb, there's a list of the Funnelweb 2 character filenames and an explanation of what that file does. For those of you with single sided disk drives that cannot fit all the Funnelweb files on a single floppy, you can omit those files that do stuff you don't need. (e.g., if you don't program in assembly language, you may want to regain the space taken by the files AT and AS.)

There's also an article about customizing your cursor.

THE NEW FUNNELWEB V4.4

described by Charles Good
Reprinted from the September BITS,
BYTES PIXELS, The Newsletter of the
Lima Ohio User Group

Accompanying the mailing in mid August 1991 are disks containing the first release of FUNNELWEB V4.4. ANY INDIVIDUAL OR ANY USER GROUP that does not receive this mailing can obtain these files from us by sending two DSDD disks (everything unarchived), OR two DSSD disks (files partially archived), OR four SSSD disks (files partially archived) and a paid return mailer to P.O. Box 647, Vendocia OH 45894.

[Of course, you can order them from us. Just mail your order to this User Group at the BCS, One Kendall Sq, Cambridge, MA 02139. Send a special order for FUNNELWEB 4.4 and a check for $5 or buy 6 PD disks, 2 of which are Funnelweb, for $11. We will send you two disks, DSSD, with the FW 4.4 files on them, partially archived -ed]

Although some releases of v4.4 have the date May 31/91, debugged v4.4 files were not actually available until early August. This version contains the new enhancements demonstrated by me at the May 18 Lima MUG Conference, plus a lot more! 80 column users will particularly benefit from some of these new features. As stated by Harry Brashear in the June 1991 issue of Micropendium, the existence of 80 column Funnelweb really justifies the purchase of an 80 column card for the 99/4A. In his letters to me, Tony McGovern suggests that this will NOT be the final Funnelweb update. At some future date he hopes to completely rewrite the Funnelweb text/program editor.

Mainly because of new extensive doc files, v4.4 will no longer fit on one DSDD disk unless it is partially archived. The system files (both 40 and 80 column) occupy 709 disk sectors and the docs fill another 874 sectors. Enough files are left unarchived to let you immediately try out the major features of v4.4, including the 40 column EDITOR and DISK REVIEW. Archiver is on disk and can be booted from Funnelweb to unpack the rest of the files. Unpacking can be done, and Funnelweb v4.4 can be used on a system with only SSSD drives We are including supplementary files, not part of the official Funnelweb v4.4, as space permits. These supplementary files include DSKU v4.2, DM1000, and foreign language character sets.

Upgrading from earlier Funnelweb versions is easy. You can use your old SYSCON file to quickly configure v4.4. Load your old SYSCON into v4.4's Configure program and then press BACK and "install" the configuration into v4.4's LOAD and FW files. You cannot safely use your old user lists (older versions of files UL and D1) directly with the new version. However, the v4.4 -READ-ME file gives easy and explicit directions for transferring data from your old UL and D1 files to the v4.4 UL and D1 user lists.

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THE NEW FEATURES ADDED SINCE v4.31

--SUPPORT FOR DSKU FILE COMMENTS: Many TI user groups use DSKU file comments to annotate their software libraries. Now these comments can be copied and (in 80 column DISK REVIEW) viewed and edited on screen. Normal file by file disk copying does not transfer DSKU file comments to the destination disk. Until now, the only way to copy these comments has been to use John Birdwell's DSKU program, or to use a whole disk file copier. Now Funnelweb will copy these comments when files are copied from within Funnelweb's 40 and 80 column DISK REVIEW. Tagging files and then asking for an action (ctrl/A) from DISK REVIEW now has a new option N(otes). First you C(opy) all the tagged files to the destination disk by pressing "C". Then pressing "N" will transfer all DSKU file comments from the source disk to the destination disk. This is a two step process.

From 80 column DISK REVIEW you can also directly read these DSKU file comments on screen, and you can also edit them or create file comments directly from the 40 column DISK REVIEW, but you can use DISK REVIEW 40' sector editing capabilities to read/edit/create such file comments. Very specific instructions on how to do this are included in the 40 column DISK REVIEW documentation.

An example of DSKU file comments can be seen at the end of this article describing each of the separate Funnelweb v4.4 files.

--MULTIPLE USER LISTS SIMULTANEOUSLY ACCESSABLE AND DISPLAYED ON SCREEN: The supplementary user lists, each listing accessable from Funnelweb's central menus as USER LIST or DISK UTILS have been available in earlier releases of Funnelweb. They are nice because the files called from these lists can have a file name of up to 10 characters and a path name of almost any length, and the files can reside in multiple drives, hard drives or ramdisks. These user lists are great for booting software from hard disks or from multiple drive systems that have "resident" disks sitting all the time in specific drives (the poor man's hard drive). Each USER LIST can have up to 8 programs that RUN with the press of one key.

There is nothing new in the above paragraph. What is new is the ability to display up to three (40 column systems) of six (80 column systems) user lists on screen simultaneously when USER LIST is selected from Funnelweb's central menu. This display can also be obtained on power up if you CONFIGURE Funnelweb to immediately boot its USER LIST. You can then move the cursor with the arrow keys over to the program you want to boot and press <enter> to run the program. That's right folks, a simultaneous display of up to 24 (in 40 columns) or 48 (in 80 columns) program names instantly bootable from any drive.

What you do is create separate user lists from within CONFIGURE using Funnelweb v4.4's UL file as a template and then save each user list to the Funnelweb boot or TIW drive (as designated from within CONFIGURE) with a file name other than UL (such as UM, UN, etc). Then take

Funnelweb v4.4's Funnelweb boot drive. When you select USER LIST from the TIW Funnelweb central menu, ML or ML80 reads all the user lists and displays all their file names on screen!

--ENHANCED 80 COLUMN SHOW DIRECTORY: 80 column users already Know about the ability to store multiple large text files in memory for rapid viewing with 80 column DISK REVIEW. Now you can do almost the same thing from within the 80 column text/program editor. From within Show Directory you can V(iew) a second text file while the text file you are editing remains in memory. The V(iew)ed file is displayed as one 80 column page of text at a time. This is not new to v4.4.

What is new is that up to 24 screens of text from one or from several V(iew)ed files CAN BE STORED IN MEMORY for almost instant access without further disK activity. I have a 44 sector TI Writer help file that takes up only 8 screens. I can store other text files in the remaining 16 screens of the Show Directory V(iew) text storage buffer. Once I load my help file into memory, I can rapidly switch back and forth between the text editor and show directory display buffers for viewing purposes. From the edit buffer I can press SD, V(iew) my help file without bothering to boot a disK directory, go back to the text I am editing, and then later instantly bring up my help file again as needed.

No, you can't rapidly exchange text between the 80 column edit and SD buffers without first saving your edit buffer text to disK. And no, this extra text V(iew) storage buffer text to disk. And no, this extra text V(iew) storage buffer is not available to 40 column users. Some of the extra VDP memory associated with 80 column cards is used to store the V(iew)ed text, and this memory does not exist on 99/4A systems without an 80 column card. 40 column users can still V(iew) text from Show Directory one screen at a time, but there is no memory buffer for the V(iew)ed text.

--COMBINATION 40/80 COLUMN EDITOR: There are times when 80 column users would benefit from a 40 column editor, for example when preparing documents designed to be displayed on a 40 column screen. The new 80 column text/program editor can be switched back and forth between a 40 and 80 column display. Of course you need an 80 column card to get an 80 column display. 40 column only users still have a separate 40 column only editor. The 40/80 column editor is combined with an 80 column only Show Directory screen with all the new V(iew) enhancements described above.

--IMPROVED ERROR HANDLING:
Funnelweb v4.4 should now be compatible with grom library devices such as O.P.A.'s gizmo, the Mechatronic gram card, and an enhanced gramulator.
When loading DF80 software, Funnelweb will now display the names of any unresolved REFs or duplicate DEFs that are encountered.

--ACCELERATING CURSOR: The flashing cursor autorepeats and also accelerates as a single key is held down. This

acceleration is new.

--ASSEMBLY "PROGRAM" FILE MAKE FROM SCRIPT LOAD: A greatly enhanced Script Loader (file SL), when called from LOADERS option of Funnelweb's central menu, can assemble a linked group of DF80 object code files into runable assembly PROGRAM FILES. Extensive documentation describing the use of SL tells how. Tony Mcgovern says this feature has been used extensively by him in the creation of Funnelweb v4.4. The new Script Load should be useful to those creating very large assembly programs from a series of separate DF80 files that take forever to load (such as early versions of the games STENNIS and ARCTURUS) you might try running them through Script Load to convert them to quick loading EA PROGRAM files.

--ASSEMBLY LANGUAGE PROGRAM SERVICES: Funnelweb loads some special assembly language callable routines (with EQU>xxxx). Many of these routines have been available in earlier versions of Funnelweb. They are now fully documented and available to the programming "public". Some of these routines include:

DSRLNK, that is compatible with multiple RS232 cards.
KSCANA, an enhanced KSCAN.
DELSPR, shuts off the sprite list for quick return to text mode.
VMBWD, a VMBW that saves space by ignoring nuls in a fixed length data value.
VMBRD, the VDP read version of VMBWD.
VFILL, fills a block of VDP RAM with a single byte value.
VSTRW, writes a string to VDP.
CURSOR, an enhanced cursor routine.
DSRREN, a direct DSR reentry from saved values.
SETGRD, sets GROM address so that module library banking is supported.
CFILE#, sets the number of open files, as in CALL FILES
RDDEV, builds a PAB in VDP.

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Below are disk directories showing the unarchived set of Funnelweb v4.4 files on two DSDD disks, complete with DSKU file comments describing each file.

Filename	File	Type	Size	Description
AR	PGM	8066	33	ARCHIVER V3.03
AS	PGM	8192	33	ASSEMBLER, part 1
AT	PGM	5432	23	ASSEMBLER, part 2
C1	PGM	1024	5	Text editor character set.
C2	PGM	1024	5	program editor character set.
C99PFI;O	D/F	80	2	Used with c99
CF	PGM	8192	33	CONFIGURE, part 1
CG	PGM	6220	26	CONFIGURE, part 2
CHARA1	PGM	1024	5	Character set for DSKU
CP	PGM	587	4	Boots c99 & returns to FW
CT8K/O	D/F	80	17	Boots FW from menu of supercart
D1	PGM	542	4	DISK UTILS user list
DR	PGM	8192	33	40 column DISK REVIEW, part 1
DR80	PGM	9984	40	80 column DISK REVIEW, part 1
DR81	PGM	8400	34	80 column DISK REVIEW, part 2
DS	PGM	7706	32	40 column DISK REVIEW, part 2

DU	PGM	8192	33	DSKU v4.2, part 1
DV	PGM	8192	33	DSKU v4.2, part 2
DW	PGM	7424	30	DSKU v4.2, part 3
EA	PGM	1860	9	Required to boot any EA files
ED	PGM	8192	33	40 column editor, part 1
ED40	PGM	8192	33	40/80 column EDITOR, part 1
ED41	PGM	4998	21	40/80 combination EDITOR, part 2
ED80	PGM	8192	33	80 column EDITOR, part 1
ED81	PGM	5028	21	80 column EDITOR, part 2
EE	PGM	4152	18	40 column EDITOR, part 2
FO	PGM	8192	33	FORMATTER, part 1
FOREIGNARC	I/F	128	12	Archived foreign character sets
FP	PGM	3620	16	FORMATTER, part 2
FSAVE	D/F	80	7	SAVE utility create's EA PROGRAMs
FW	PGM	8152	33	Main FUNNELWEB program, from EA
LDFW	D/F	80	10	Boots FW from Minimem or EA cart
LH	PGM	3836	16	LINE HUNTER assy code utility
LL	PGM	2064	10	LOW LOADER. Boots LL files
LOAD	PGM	7873	32	Main Funnelweb program, from XB
MG	PGM	8192	33	DM1000, part 1
MH	PGM	4978	21	DM1000, part 2
ML	PGM	526	4	40 column MULTI LIST user list
ML80	PGM	542	4	80 column MULTI LIST user list
QD	PGM	2622	12	QUICK DIRECTORY, part 1
QF	PGM	2544	11	QUICK DIRECTORY, part 2
SCRIPT	D/V	80	4	Sample SL script file
SL	PGM	3002	13	Needed to boot SL file series
SYSCON	PGM	1214	8	System configuration for CF/CG
UL	PGM	542	4	Central Menu USER LIST template
XB4THLD	PGM	203	2	Boots TI FORTH from XB user list
FWDOC/EASM	D/V	80	40	PROGRAM EDITOR doc
FWDOC/EDAV	D/V	80	57	80 column TEXT EDITOR doc
FWDOC/LOAD	D/V	80	48	Boot Funnelweb, XB list doc
FWDOC/PSRV	D/V	80	95	New assembly calls doc
FWDOC/REPT	D/V	80	60	Bug report doc
FWDOC/SCLL	D/V	80	51	SL, LL, UL, and ML doc
FWDOC/TIWR	D/V	80	31	TEXT EDITOR doc, 40 & 80 cols
FWDOC/UTIL	D/V	80	38	CF CP FSAVE LDFW UL LH CT8K/O
-READ-ME	D/V	80	53	It really is importanto
FOREIGNDOC	D/V	80	3	Foreign lang character sets doc
FWDOC/DR40	D/V	80	77	40 column DISK REVIEW doc, part1
FWDOC/DR41	D/V	80	75	40 column DISK REVIEW doc, part2
FWDOC/DR80	D/V	80	99	80 column DISK REVIEW doc, part1
FWDOC/DR81	D/V	80	51	80 column DISK REVIEW doc, part2
FWDOC/DR82	D/V	80	99	80 column DISK REVIEW doc, part3

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CREATE YOUR OWN CURSOR

by Bob Turner
Reprinted from the New
Horizons-Northwest Ohio 99ers

I don't quite know how to give the proper credit to this routine, but whoever discovered this way to modify the cursor is an unsung hero.

While I have experimented with TI Extended Basic, I have learned many ways to make it do the things about which the manual never told you. Also, I have learned not to forget the clever programmers who offered their information and discoveries to the TI community.

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Creating a cursor is rather easy, and once done, the cursor routine can always be used in other programs. If you understand how to define a character then understanding how to create a cursor is just as easy.

First, here is the TI Extended basic code to re-define the cursor:

```
100 CALL CLEAR :: CALL INIT
110 CALL LOAD(8196,63,248)
120 CALL LOAD(16376,67,85,82
,83,79,82,48,8)
130 CALL LOAD(12288,255,129,
129,129,129,129,129,255)
140 CALL LOAD(12296,2,0,3,24
0,2,1,48,0,2,2,0,8,4,32,32,3
6,4,91)
150 CALL LINK("CURSOR")
```

Line 130 defines the cursor description (what it looks like). Defining the cursor is made rather easy because you are not using HEX but decimal.

Decimal>	128	64	32	16	08	04	02	01	
ROW 1	X	X	X	X	X	X	X	X	=255
ROW 2	X							X	=129
ROW 3	X							X	=129
ROW 4	X							X	=129
ROW 5	X							X	=129
ROW 6	X							X	=129
ROW 7	X							X	=129
ROW 8	X	X	X	X	X	X	X	X	=255

As you can see, the values come from adding the total value across each row to define the segments in the cursor. (Note X's in the figure and the weighted value that was totaled.)

After defining your custom made cursor, save it to disk and you are ready for your first run.

Run your program and look at your cursor. If you don't like it, merely make some changes and run it again. Repeat this process until you are satisfied with your new cursor. The new cursor will stay until you turn off the console.

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Here's a tip: redesign your cursor inside an Extended BASIC Load program and it will stay redesigned until you turn off your console.

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