

NEWJUG 99ER'S NEWS

AUGUST 1992

NEWJUG 99ER'S NEWS



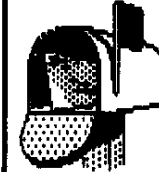
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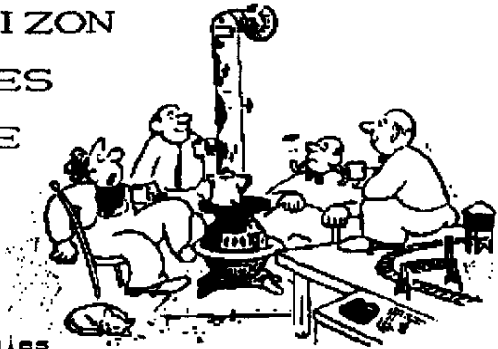


FROM:
NEWJUG 99ER'S UG
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POSTAGE
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TO:
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WESTERN HORIZON
TECHNOLOGIES
CONFERENCE



Sunday, July 12, 9:30 pm
Don O'Neil discusses the
products and services of
Western Horizon Technologies
Attendees:

JERRYVC
CAL47
JHWHITE
EICHER
DONEIL
MICBR0
TIRUGED
DGAZSV

Jeff
Dan
Don O'Neil

<Jeff> We are about ready to start.

<Don O'Neil> If I disappear tonight it's because my line seems to be a little noisy tonight. It's been like this for a few days. I may have to logon to a different node.

<Dan> Must be using that clone again ;)

<Don O'Neil> nope.

<Jeff> Okay. It is time to officially start. We'll let Don have the opening remarks.

<Don O'Neil> OK, here is a short announcement....

OFFICIAL ANNOUNCEMENT

As of June 1992, the Accelerator as it was known is NO LONGER going to be available. Due to technical incompatibilities between the TMS99105 and the TI 99/4a, the accelerator will not function without MAJOR modification to the 4a console. The original concept for the accelerator was to have a user install-able CPU upgrade, with the modifications needed to make the 99105 work in a 4a, it would no longer be install-able by the average TI'er. The cost of the unit was also determined to be out of range of too many TI'ers, and thus the project has been canceled.

HOWEVER, WHT is devoted to you the user and promises an upgrade for your 99/4a system. We will develop an INEXPENSIVE alternative to your 4a, using the 9995 microprocessor (found in the Geneve) so you can enjoy 100% 4a compatibility with increased speed. We are currently researching such a project and NO decisions have been made about how it will be configured. We will keep you updated on this project as progress is made.

Did that come across ok?

JERRYVC> fine

<Don O'Neil> Any questions about it before we go on?

<Don O'Neil> OK, this evening I'm open to ANY questions on the following.... SCSI, 4a MEMEX, DIGI-PORT, PROTO SERVICES, REPAIR SERVICES, ETC... Which is basically everything. I don't want to get hot and heavy into any "unofficial" products. But a few questions/comments are appreciated. Where shall we start?

MICBR0> SCSI what peripherals do you see being used, beside HD?

<Don O'Neil> SCSI Floppy, CD ROM, Scanners, Tape backups. We will support HD's, Floppy's, CD ROM, and 1 tape unit (the cheapest we can find). Scanners and other tape units will require special drivers to operate, but all needs info will be in the doc's to create your own driver (provided you can program).

MICBR0> CD ROM requires a master - will the s/w support High Sierra?

<Don O'Neil> At this point I'm not sure. I have been looking into the 2 formats, High Sierra and ISO 9660. We may support both, maybe only one. It depends on the information we can get.

MICBR0> How many devices (names) can be supported?

<Don O'Neil> We will ONLY support CD ROM's that are IBM compatible SCSI devices. What do you mean by devices?

MICBR0> number of different units, CD, floppy, HD, etc..

<Don O'Neil> Oh,ok. The SCSI card can support up to 7 devices in one chain, each device can be a floppy, HD, CD ROM, etc.

MICBR0> thanks. Why would I want a SCSI floppy?

<Don O'Neil> Higher capacities. You can buy SCSI floppy drives that will format to 3.8 MB. You cannot get more than 720K on any existing TI

controller card. The SCSI floppy drives will also be able to read and write IBM PC formatted floppies as if they were TI floppies. You will essentially have PC Transfer built in. Something that other floppy drive controllers do not offer. SCSI Floppies are only about 2x more expensive than regular floppy drives. A 4MB unit will be less than \$200. And it can read ALL ti and PC formats up to 3.8 MB.

- MICBRO> Who makes SCSI floppy drives now? And who has them in a clone?
- <Don O'Neil> Teac, Matsushita, and others. They are not used in Clones.... SCSI Floppies are used in the UNIX workstation industry where SCSI is the only mass storage interface. HP, Sun, Dec, NeXT, Mac, etc.. ga.
- CAL47> Is someone (Jeff?) writing Hard Disk Manager software for SCSI card?
- MICBRO> TI? Can the 9995 support the UNIX kernel? I know some 99xx
- <Don O'Neil> At this point Jeff is writing the DM, BUT we are searching for someone else to take on this task so it will be released sooner. We may patch an existing DM with SCSI routines, at this point we are undecided. You do not need to have a UNIX kernel to have access to SCSI Floppies, or for that matter, ANY SCSI device. BUT, there is a version of UNIX that was written for the 990 business machines which used the 9900 as a CPU, and the 9995 is compatible with the 9900.
- <Jeff> [So that the conference transcript does not get unwieldy, let's keep questions to one at a time. Just a reminder.]
- <Don O'Neil> ga.
- JERRYVC> general SCSI question -- I see a lot of devices that come with their own host adapter... seems to imply a lot of potential compatibility glitches. What causes this and how are you handling it?
- <Don O'Neil> Most devices that come with their own host card are not true SCSI devices, they are usually some offshoot of SCSI. My suggestion is to keep to the major manufacturers of SCSI drives. A list of tested compatible drives will be in the doc's, along with suppliers of these drives. ga.
- JERRYVC> Will you support "bridge boards such as the

- Adaptec units that attach to an existing MFM or RLL drive?
- <Jeff> c: It could also be that the device driver that comes with the host adaptor is fine-tuned to that card/drive combination.
- <Don O'Neil> If the units support the standard SCSI protocol and command set, then yes. If you buy a drive and wish to use it with your scsi card, we can test it for you for free. If it requires a tweak to our DSR, we will supply that for a minimal cost. Chances are that 90% of the TRUE SCSI devices out there will be compatible, and many others will be too. ga.
- JERRYVC> The reason I ask that some very good old drives are getting very cheap and the Adaptec boards are also getting inexpensive. ga
- <Don O'Neil> I am not familiar with Adaptec products, but will contact them asap.
- CAL47> Will the SCSI coexist with a TI, Myarc or CC controller if an existing DM is Patched
- <Don O'Neil> The SCSI will co-exist with ALL current FDC's and the HFDC. The Patch to a DM will only be for SCSI HD formatting, and PC floppy formatting on a SCSI floppy.
- CAL47> thanks. ga
- <Don O'Neil> The MAX config supported will be the SCSI, HFDC, and FDC in the P-Box at the same time. So if you have a Geneve with HFDC and FDC, you can plug in the SCSI and get going right away. ga.
- <Dan> Don, Correct me if I am wrong, but whether the SCSI card will work on the geneve is highly dependent on getting the mdos source code correct?
- <Don O'Neil> Yes and No. From what I understand, MDOS uses the standard DSR links for doing everything but format, so it may be compatible in a Geneve through MDOS for everything but format. BUT, To ensure 100% compatibility (such as boot and format) the MDOS source will have to be patched. ga.
- <Jeff> c: Chances at getting MDOS source code are very good. Find out Tuesday.
- MICBRO> No, but with C and UNIX... lots of s/w unavailable. g'night - signed off -
- <Jeff> c: For the SCSI to work on the Geneve without changes to MDOS will be nearly miraculous. ga

<Don O'Neil> Agreed.

<CAL47> But will GPL mode work without

<Don O'Neil> We won't know until it's completed (the DSR).

<Jeff> c: Geneve-compatibility of any hardware not already supported by MDOS/GPL is not a current issue of concern.

<Jeff> Perhaps the discussion should move to 4A Memex or WHI services.

<Don O'Neil> sure, any ?

<Jeff> Which peripherals can you fix?

<Don O'Neil> Anything EXCEPT the Geneve and HFDC.

<Jeff> Perhaps you can go over your services, and what is planned for 4A Memex.

<Don O'Neil> Well, so far on the 4a Memex, progress is continuing. Since we had to change the design on the 4a Memex from a discontinued TI DRAM controller to a state of the art AMD one, the capacities of 4a Memex have changed. 4a Memex will now support up to 16 Megabytes of DRAM in it's four SIMM slots. You can install 256K, 1MB or 4MB SIMMS. The base unit will come with 1MB installed for prelim price of \$175.

I have no idea when it will ship, as we only have one software developer working for us (Jeff) and one person can only do so much. It will have temporary RAM disk functions like the Geneve, and full RAMBO compatibility. A: Beard has been contracted to port the FULL TI C over to the 4a Memex, and a copy will ship with each unit. the 4a Memex REPLACES you old TI 32K card, and to take FULL advantage of it, you shouldn't have any 32K in your system except for the 4a Memex.

Hopefully, it will open up the market for new ported C programs from the PC and UNIX world.

Any questions on 4a Memex?

JERRYVC> Will it work with some of the speed-up hacks like changing the clock speed?

<Jeff> good ?

<Don O'Neil> Yes, it will. The DRAM controller runs off of the clock on the P-Box Bus. It will have a jumper for operations up to 25 Mhz.

<Don O'Neil> Basically, you will be able to run it up to 10

Mhz without a jumper change, and after changing the jumper, up to 25Mhz. ga.

JERRYVC> So some of the synergy intended for the accelerator may still be possible?

<Don O'Neil> What do you mean?

<Jeff> c: Even with the accelerator, that clock signal would probably not go above 6 MHz.

JERRYVC> I recollect (perhaps inaccurately) that the MEMEX was to be capable of much better performance than with a standard 4a.

<Don O'Neil> Yes, It can run with a bus speed up to 25 MHz, MUCH faster than any known 9900 compatible processor. ga.

JERRYVC> What would it take to make good use of this potential?

<Don O'Neil> A Fast processor, such as the SMJ68689.

<Jeff> c: Which isn't all that fast.

<Don O'Neil> Faster than any other 9900 compatible processor.

<Jeff> c: Not to stray off topic, but it is slower than the 99105A. It has a faster clock, but is still slower.

JERRYVC> About how much could we tweak a 9900 in a 4a?

<Don O'Neil> Up to 4 Mhz.

JERRYVC> So roughly double the standard speed?

<Don O'Neil> No, the standard speed is 3 Mhz. 33% faster. We are hoping that the 4a Memex will be Geneve compatible, and if it is, with a MDOS patch, it could be used in place of the Geneve MEMEX.

JERRYVC> Why such a modest increase - where is the limiting factor?

<Don O'Neil> 9900 speed. The Fastest 9900 you can get is 4 Mhz.

JERRYVC> Doesn't the 4a insert a lot of wait states for memory access?

<Jeff> c: A very speed-limiting factor is the 4 wait states on the 4A bus.

<Don O'Neil> Yes it does.

JERRYVC> Any way around that limitation?

<Don O'Neil> You could get a nice speed increase by eliminating 3 of the 4 waits, and going to 4 Mhz.

JERRYVC> YES that sounds like a hummer!

<Don O'Neil> In a 4a console there is NO EASY way to get around it.

<Jeff> c: I am not suggesting this, but it might be something Don and WHT may look into doing. Making a 4 Mhz 9900 motherboard without the wait states.

<Don O'Neil> The EASIEST way to get increased performance and 99/4a compatibility is to do use the 9995 in a new system, similar to the Geneve. BUT, instead of emulating GROM, use the actual GROM's from your old 4a console.

JERRYVC> Is this the kind of thing you were thinking of in your first comment tonight?

<Don O'Neil> In that case the system clock could go up to 18-20 Mhz (4.5-5Mhz internal). Yes, this is.

<Jeff> c: The 9995 causes some trouble spots that a 9900 at 4 Mhz would not.

<Don O'Neil> That would be a real screamer compared to the standard 4a.

JERRYVC> Would you be able to use those GROMs at that speed - if not, what options are there?

<Don O'Neil> GROM's generate their own wait states, and will run as fast as they can. That's the nice thing about GROM's.

<Jeff> The wait-state generation circuitry of GROM and TI and CC FDC's. Forget about supporting the TI 32K.

<Don O'Neil> I know about those concerns, and I think there are ways around them.

<Don O'Neil> Any more ? on the 4a Memex? OK, I'll talk about the Digi-Port for a bit then. We are shipping Digi-Port now, and have been since the Line Faire. Currently you get version 1.0 of the software, and version 2.0 is going to be available soon. ALL registered users will receive 2.0 for FREE!!!

Digi-Port is a Digital sound player for the 4a or Geneve and supports VDP, RAMBO, 32K and Geneve memory expansion for playback space. You can play back just about ANY digital sound generated on a Mac, Pc, NeXT, Sun, etc.. I have not yet found a sound I can't play. Version 2.0 provides an XB link for playing

sounds with RAMBO, so you can incorporate sound effects in your XB programs. Each package comes with the sound adaptor (which plugs into your PIO port), the sound player and 10 disks of sounds (SSSD, DSSD or D500).

Price is \$40, available NOW! ga.

CAL47> I take it that version 2 is not available yet?

<Don O'Neil> No, soon though. We are incorporating more features in v2 than previously planned, one of the reasons for it's tardiness.

<Jeff> c: You have me to thank for any delays in the Digi-Port release. I tell people again and again that I am not a programmer.

CAL47> Bud put one in the mail friday.

<Don O'Neil> No, you're a perfectionist.

CAL47> Glad to hear that!

<Don O'Neil> You will still have LOT'S of fun with version 1. There are only a few things missing... Cor Comp rs232 support, 80 Column support, Directory support, and the XB link. any more q's?

CAL47> The only thing I'll miss is the directory.

<Jeff> c: And the XB link may be an EA and MM link, too. But don't hold me to that.

<Don O'Neil> Like I said, not much missing.

CAL47> EA link would be nice.

<Don O'Neil> Jeff, any link I've ever seen you make is like that, so I'll be surprised if it doesn't work that way. Well, if there are no more ?'s on Digi-port, I'll move on to my services, then to the Horizon 4000.

<Jeff> c: EA almost without question. MM is a maybe (because of possible RAMBO conflict).

<Don O'Neil> I offer a BUNCH of ROM and PAL replacement products for repairing your peripheral cards. Prices vary, so check the price list I uploaded here this evening.

CAL47> EXCEPT Geneve & HFDC?

<Don O'Neil> I also offer repair services for \$30/hr + parts on everything EXCEPT the HFDC and GENEVE> I do offer PAL's and EPROM's for the HFDC and GENEVE, but just don't repair them.

JERRYVC> [I will try to have Don's price list available

tomorrow - JerryJ

<Don O'Neil> Most repairs are less than 1 Hr.
 CAL47> Great news, PAL's
 <Don O'Neil> We are also hoping to introduce a SPEED UP CHIP SET for the Geneve. This chip set will be a new PAL and EPROM that will give you better video performance. No price or release date as of yet.
 CAL47> performance? meaning what?
 <Don O'Neil> The VDP access times will be reduces, giving you better performance in programs such as GEN SHELL.
 CAL47> Screen rewrites then?
 <Don O'Neil> Yes.
 <Jeff> c: Even faster Parsec at "GPL-5".
 <Don O'Neil> My price list shows all currently available products and services.
 JERRYVC> Have you considered doing pieces for some the rarer hardware - say hexbus peripherals?
 <Don O'Neil> What do you mean by "pieces"
 JERRYVC> PALs and such (ROMs?)
 <Don O'Neil> Well, if I can get a working PAL, most of the time I can duplicate it. SO, if somebody asks, I can try to look for a replacement product for them. BUT IF YOU DON'T ASK I WON'T LOOK!
 JERRYVC> Interesting -- I have some old stuff and no recourse if something fails.
 <Don O'Neil> Jerry, If you send me the units, we can work out a deal for making you a back up.
 JERRYVC> Sounds good - let me do a mini-inventory and see what you might be interested in.
 <Don O'Neil> OK. Any ?'s on my services and repair parts?
 JERRYVC> I'll send you a list some time this week.
 <Don O'Neil> great.
 On to the HORIZON 4000 RAM DISK....
 <Jeff> What new features does it have?
 <Don O'Neil> Recently the board house manufacturing the Horizon 3000 RAM disk went under and took all the 3000 stuff with them. At this point, Bud

Mills Services NO LONGER has ANY 3000 units for sale. Because of this, a new board house will be used, and the 3000 will be updated to add more features. The 4000 will now support up to 8 MEGABYTES of RAM disk, using 512k x 8 SRAMS or 128K x 8 SRAMS (32K SRAMS will no longer be supported) RAMBO will be BUILT IN, and so will the 32K mod (empty socket for your 32K chip).

WHT has been asked to "simplify" the circuitry a bit for better performance/tolerance in your system. Overall the 4000 will be a better more stable product for your 4e. The price will only rise marginally to account for royalty payments to OPA for the RAMBO addition.

Any ?'s on the 4000?

CAL47> Has provision been made for the Phoenix mod on the new board?
 <Don O'Neil> The PHOENIX mod is BUILT IN!!! With the removal of 2 jumpers, the card is now a Phoenix card. ga.
 JERRYVC> What is your estimate of prices for the large SRAMS?
 <Don O'Neil> around \$150 I guess. They are still not widely available.
 JERRYVC> and the 128s?
 <Jeff> As cheap as you can find them.
 <Don O'Neil> \$30. (From WHT and BMS)
 JERRYVC> Sounds like 128 is still less per meg (for now).
 <Don O'Neil> Yes, true, the 128's are still cheaper. BUT the 512's have not been out very long yet, and the price is still dropping.
 JERRYVC> Any guesses as to when they will reach parity?
 <Don O'Neil> I'd have to guess within a year. The manufacturers of the 512k units are still making them hybrid modules.
 <Jeff> From what I understand, the 4000 will have more tolerance for "off-brand" RAM chips, i.e., not tuned to particular manufacturer specs like the earlier Horizons (and Geneve MEMEX, for that matter).
 <Don O'Neil> Yes. Any more q's?
 JERRYVC> Thanks Don.

- <Jeff> Unless there is something left to discuss, I suppose it is time to close. Thanks for coming, Dor. WHT has some very interesting projects.
- <Don O'Neil> Thanks for having me. If anybody has ANY questions, please feel free to call, EMAIL or write.
- JERRYVC I'm closing my log and going to check Don's files - Goodnight all.
- <Don O'Neil> Goodnight!

--- END ---



RECIPE OF THE MONTH

BY: DEBBIE GAZSV



INGREDIENTS: RATATOUILLE

- 1 Eggplant (Medium Sized ~ 1.5 lbs)
- 2 Small Zucchini (1/2 lb)
- 1 Green Bell Pepper (Chopped ~ 1/2 cup)
- 2 Tomatoes (Cut into quarters)
- 1/4 cup Olive Oil or Vegetable Oil
- 1 1/2 tsp Salt
- 1/4 tsp Pepper
- 1 Clove of Garlic (crushed)
- 1/4 cup onions (chopped)

To prepare Eggplant, cut it into cubes, put it in a strainer and add salt. Place a weight object on top of the eggplant and let it stand for 30 minutes. The purpose of the weighted object is to squeeze the bitter taste out of the eggplant. Wash the eggplant and pat dry. Place oil, eggplant, zucchini, onion, garlic and green pepper in frying pan. Saute and cover for 10 minutes. Now add the tomatoes, salt and pepper to taste. Cook until tender (Minimum of 5 minutes). Serves 6.

Editor's Note:

During the next 6 months, I won't be able to devote as much time to the newsletter as I'd like. In order to still be able to produce a worthy product, I've got to cut back some of the more time consuming parts of the newsletter. As you might expect, the research and creation of the BBS SCENE column takes too much time to be a regular articles. When my workload lessens, the column will be back.

Editor's Forum



Where are we going? This is one question I find myself always asking and a question that appears on the minds of many others. When Texas Instruments put us up for adoption, we were many in number and there were enough of us to insure our survival. Many of the TI owners stepped forward and took on responsibility (club officer, librarian, etc.). For most, other non-TI duties suffered or were neglected. I find myself painting the exterior of my house and wish my kids were old enough to inherit some of my other household chores.

As time passes, our numbers begin to dwindle. Those of us who are always volunteering or devoting time to TI activities, are growing tired of being the only volunteer-in-town. If any of you spent any time in the armed forces, you learned the following phrase quickly: "Don't volunteer for ANYTHING".

Well in case you hadn't noticed, those seats that used to be filled on your left and right at club activities, have VACANCY signs on them. It's hard enough to get a chair occupied with a body to volunteer. It's impossible to get an empty chair to do anything but take up space. If you want to see the TI survive, then raise your hand the next time something needs to be done and say, "Mr President, I'd

like to volunteer for that task".

While reading some of the newsletters that we get in exchange, there were two items that caught my interest. The first concerns the reprinting articles from other newsletters and the second concerns the frequency of exchange newsletters. The reason these caught my eye was that I feel that our group is guilty of at least one of these crimes on a frequent basis. When I first took over the newsletter, I vowed that I wouldn't reprint articles from other newsletters. My feelings on the issue were that the newsletter should contain ORIGINAL material. When deadlines for newsletters get short, we sometimes compromise our ideals and reprint articles. The one thing that I try to faithfully adhere to is, "giving credit where credit is due". To insure that credit is given, put a banner and page number on each page of your club newsletter. This way, credit is easily established when the article is copied or reprinted. Irregular exchanges is something of which our newsletter is frequently guilty. In the two and 1/2 years as Newsletter Editor, I've managed to miss only one US meeting deadline, but exchanges cost money and the newsletter has to be reduced in size, copied and mailed on a bi-monthly or quarterly basis to keep our costs down. If you seem to be getting our newsletter every second or third month, please be patient with us; we're just trying to remain solvent.

Newsletter Exchange

Last month, I published a exchange column, only to have another new exchange start a few days later. The following list represents the latest and greatest exchange list for our group.

We look forward to hearing from any group wishing to initiate an exchange and encourage others to use this list for communication with other groups. If you know of any UG (not on our list) that would like to exchange newsletters, we'd be very interested in hearing from you via the comments and suggestions on the cover page.

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2812 West 33rd Street
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15204 Louis Mill Dr
Chantilly, VA 22021

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*Greater Akron 99er's
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Great Lakes Computer Group
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Roseville, MI 48066-0152

Milwaukee Area Users Group
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Wauwatosa, WI 53222

Siouxland 99er's
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Sioux Falls, SD 57106

Chicago TI User's Group
P.O. Box 578341
Chicago, IL 60657

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Kansas City, KS 66104

Dallas TI Home Computer
P.O. Box 29863
Dallas, TX 75229

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c/o Barbara Massey
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*Houston HUG
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Sudbury 99er's
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216 10th Ave
New Westminster, B.C.
CANADA V3L 2B2

Joke Of The Month



A devout Catholic woman was running late to church when, in her haste, she stumbled and fell, skinning her elbows and knees, and splitting her skirt up the back.

Dazed and confused, she glanced up and saw a small boy watching her. "Is mass out?" she asked.
"No, ma'am," he replied, "but your hat is on crooked."

99/4A & 9640

VENDORS

Alboes Computer Supplies
6298 Hamilton Rd.
36 Main Street Village
Columbus, Ga 31909
(404) 327-4900

Regard Software
P.O. Box 10306
Rockville, Md 20850
(703) 255-3885
Catalog Available

Breatz Computer Services
719 East Byrd Street
Appleton, Wisc 54911
(414) 731-3478
(414) 731-4320 after 6pm
Catalog \$2

Bud Mills Services
166 Dartmouth Dr
Toledo, Ohio 43614
(419) 965-5946

CaDD Electronics
52 Audubon Rd.
Haverhill, Ma 01830
(603) 895-0119

Competition Computer
2629 W National Ave
Milwaukee, Wisc 53204
(800) 242-7982 in Wisconsin
(800) 662-9253 all others
Catalog \$1

Comproline
1949 Evergreen Ave.
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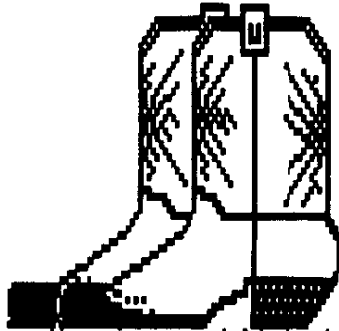
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Getting A Real Big Out of c99

BY

DAN GARZYV



Over one year ago, Bruce Harrison published an article in MicroPendum for a universal boot function to detect the boot device of program image files. The original article was geared to both assembly and basic language programmers. I took the code and put it within a c99 environment for other c enthusiasts. At the time, I found it capable of working with any FDC (floppy disk controller) and ramdisk devices. Recently, it had been discovered that although it would detect the boot drives attached to an HFDC, the code rendered floppy devices attached to the HFDC, incapable of file i/o afterwards. With the assistance of Jesse and Shirley Slicer, this bug in the boot function has been corrected. Listed below are the source code for the boot function and a simple test of the boot function.

```
/* device function adopted for use with c99
   original source provided by Bruce Harrison
   assembly source code modified by Jesse Slicer
   to work with floppy/hard drives attached to
   a MYARC HFDC.
   And a special thanks to Shirley Slicer for her
   assistance in identifying the problem code
*/
```

```
/*asm
WS EQU >20BA
CWS EQU >8300
STATUS EQU >837C
*/
/*endasm
entry boot_device;
char boot[6];
device()
( /*asm
MOV 11,0>8330 STASH THE RETURN
LWPI WS USE OUR WORKSPACE
MOV 0>8300,12 GET THE CRU BASE IN R12
MOV 0>8302,9 GET THE ROM ADDR FOR DEVICE
LI 10,BOOT POINT TO THE TEXT BUFFER
SBO >00 ENABLE THE ROM
RI 9,>0004 ADDING 4 PUTS YOU AT LEN BYTE
MOVB *9+,4 PLACE IT IN R4 AND INCREMENT R9
SRL 4,>08 RIGHT JUSTIFY LENGTH IN R4
MOVEIT MOVB *9+,*10+ MOVE 1 BYTE FROM ROM TO BUFFER
DEC 4 FINISHED?
JNE MOVEIT NO, DO ANOTHER BYTE
*/
```

```
SBZ >00 DISABLE THE ROM
MOV 4,*10 PUT NULL BYTE AT END FOR C99
LWPI CWS LOAD GPL WORKSPACE (ALSO C99 WS)
MOV 0>8330,11 GET RETURN ADDRESS BACK
MOVB 4,*STATUS CLEAR THE STATUS BYTE
(CR4 IS ZERO AT THIS POINT)
```

*

) *endasm

```
/* Simple test program for the boot function */
```

```
extern printf(),device();
extern char boot[];

main()
{device();
 printf("boot device was %s\n",boot);
}
```