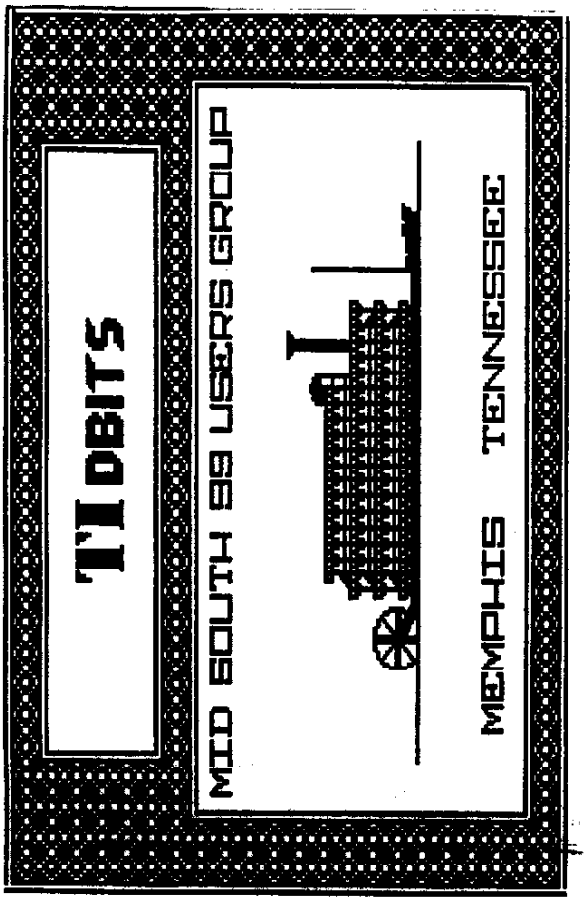


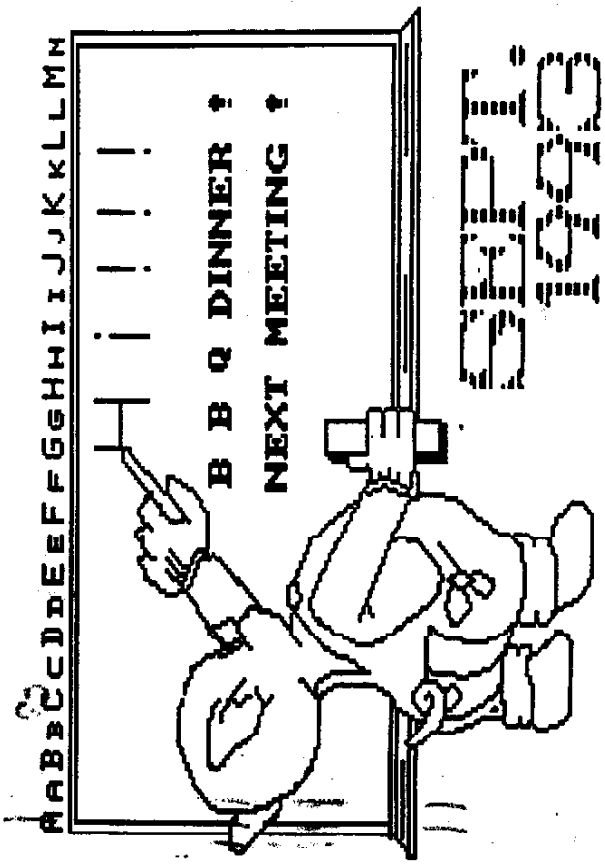


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Newsletter of the MID-SOUTH 99 USERS GROUP-Vol 11, #9-SEP 1993

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## PRESIDENT'S BIT

---------- By Gary W. Cox

Attendance to meetings lately have been very small lately, possibly due to the lack of a structured program each month? So we are still in need to someone to put together a program for the meetings each month!

However, this months meeting will be a special one as we will once again be having a BBQ DINNER! We are no longer able to absorb the full cost of the dinner as we have in the past so the cost will be somewhere between $3 and $5 with a $1 discount if you bring a desert!

The next Chicago TI Faire is again approaching to be held October 30th at a new location of the Holiday Inn in Gurnee, Illinois. Those interested in driving up with some of us in the group need to contact me at this months meeting so we can make hotel reservations and travel arrangements.

C ya at this months meeting....

## CHRIS' CORNER

----------by Chris Marshall
from the Great Lakes Computer Group Inc., Feb. 1993

A moment to talk about the IMMEDIATE mode.

Exactly like the name says, immediately upon entering a statement you recieve a solution.

```
Print 2*2 <enter>
 4
```

The solution (4) will be displayed in the second space because of what is called "THE BEGINNING SPACE" by those of us who do not wish to be technical.

```
Print 2*2;4+4 <enter>
 4 8
```

The solution (4) and (8) appear immediately. The ";" is used when you wish to place an answer (number or word) "NEXT TO" one another. Don't forget about the beginning space and now there is a "TRAILING SPACE" for numbers too!! The above example is actualy two problems side-by-side.

```
Print "HAPPY 1993";2*2 <enter>
HAPPY 1993 4
```

The solution (HAPPY 1993 4) pops up on the screen. Remember that numbers always have that beginning space.

```
PRINT "HAPPY 1993";"TO ALL" <enter>
HAPPY 1993TO ALL
```

Woops!! What is printed within the "'s, will appear on the screen exactly as it was entered. So what aout the ";"? Words all run together, there are no beginning or trailing spaces when using words.

```
Print "HAPPY 1993";" TO ALL' <enter>
HAPPY 1993 TO ALL
```

We actually print the space by placing it inside the ""s so

that it will appear in the solution.

A word about the signs for arithmatic. The standard - and + are used for minus and plus. The / ad * are used for division and multiplication.

They have an order also. The division or multiplication is done first, followed by the addition or subtraction.

(Should mention that numbers in parenthesis are done before anything else).

```
Print (8*4)+8-4+8/4+8+4                    32+8-4+8/4+8+4
 <enter>                                   32+8-4+2  +8+4
 50                                        32+4  +2  +8+4
                                            50
```

(As this is actually one problem, only the single answer of (50) will appear on the screen, the rest of the numbers are there to show how the computer did the computation.

Try a couple of entries in the IMMEDIATE MODE to see how this works with numbmers and words.

Chris Marshall

# SCSI ONLINE

SCSI Conference with Jeff White on Delphi TI NET
9:30pm 8-24-93

Attendees:

| | | | |
|---|---|---|---|
| JHWHITE | JeffW | GREGRPH | |
| FDOS | Bill | BRADSNYDER | Brad |
| WMSHERIDAN | also Bill | EICHER | Dano |
| RMARKUS | Ron | TIMTESCH | Tim |
| CAL47 | | JERRYC | |
| HOMZA | John | BCP | |

,JeffW> The main purpose of this conference is to assure everyone that SCSI is coming, even if it is taking longer than expected. This conference may be scheduled too soon after the article I posted. But I thought it would be nice to get realtime feedback and discussion. The option to discuss what has been posted in the vendors forum there is, of course, always available.

,JeffW> We will start in a few (under 5) minutes. 10 minutes late. I am not sure if Tim Tesch or Beery Miller will try to make it or not.

,JeffW> Okay, we have waited long enough. Stragglers will just have to catch up when they arrive.

,JeffW> First, the DSR coders are not estimating any date for completion of a SCSI DSR.

WMSHERIDAN> .Bill> most interested. How long? Will it work so TI will b[noise] can access CD ROM?

,JeffW> I think that question was garbled, Bill. How long? As long as it takes.

WMSHERIDAN> Can SCSI access CD-ROM?

,JeffW> I expect that the DSR will go through various evolutions, but expect anything we release will be relatively bug-free. Most updates will be to add features.

,DANO> SCSI as a device can access a SCSI built CD ROM. BUT You will need software on the TI end that will know what to do with that information. I provided Mike Maksimik with technical documentation on how to access 5 of the most common scsi CD roms on a low level. If you are interested in CD ROM I would suggest you look at Computer Craft Mag. They published an EXCELLENT article on CD ROM standards. Just as there are different ways to format a floppy ( using say a tech 5.25 360 K) drive, there are different ways to format a CD rom. MANY ways actually.

,JeffW> (Dan has researched SCSI CD ROM specs.) To clarify, the low-level as of now will read CD ROM just fine. However, interpreting the data stored on the CD ROM will require code to understand specification not entirely compatible (not at all) with TI disk data structures.

FDOS> Who will make CD ROMs for TI/Geneve?

,DANO> Bill, there is no NEED to have TI specific CD roms.

FDOS> They won't contain programs?

,DANO> I am using a CD ROM at work they works equally well on HPUX as it does MSDOS. CD ROMS just hold data. Most of the time the data is just files with sound or pictures.

,JeffW> However, Dan, there is the possibility TO HAVE TI-specific CD ROMs.

,DANO> TI specific in regards to holding information that is of interest to TIers. Not in the manner of a CD rom that ONLY TIers could read....

FDOS> Will the SCSI be limited to 4 GB?

,DANO> 4GB <> limited....

,JeffW> We could put TI files on standard CD ROM by including at the start of the data field a TIFILES (Paul Charlton XModem) header.

,DANO> SCSI as a device is unlimited. The 4GB limit is imposed by the now 'standard' file allocation hierarchy, used by the HFDC....

,JeffW> Let's pause while I clarify a few points. Industry standard CD ROM has industry standard formats. First, it is possible to make a CD ROM for the WHT SCSI that would not be industry standard.

FDOS> I meant for MDOS considering Beery's comments.

,Brad> ! There is alread a CD ROM with TI programs on it! It has all sorts of fairware, including TI.

,Brad> Dano, I'll ask the local BBS again.

,JeffW> The 4GB limit could be surpassed by adding more extensions to the DSR specs. However, there currently are few, if any, drives over 4 GB.

,Dano> If you took everything ever written for the TI in any language, I doubt if it would be greater than 1 gig...

FDOS> In our community, I don't think we need to consider 4 GB as a serious limit.

,JeffW> There is a simple reason for specifying 4 GB as a reasonable limitation. First, the HFDCC hard disk data structure cannot support more than 256 Meg. It has been commonly agreed among developers that supporting the HFDC format is a necessary evil or benefit.

FDOS> Will MDOS then limit the SCSI to 256 MB? Meaning that Beery is unwilling to make the necessary changes to support 4GB?

,JeffW> However, CD ROM drives are normally in the 600 Meg range. So we need a way to support >256 Meg. Partition

was the answer I came up with. Since we can have as many 256 Meg partitions as we want, and the HFDCC spec will support up to 16 Meg sectors, the logical limit is 4 GB. So while no one will probably ever used a 1 GB drive with WHT SCSI, supporting up to 4 GB is not a real burden on the DSR. It is actually one of the simpler concepts of the proposal.

FDOS> Like you, Jeff, I intend to use the SCSI controller on my Geneve, not on the TI. So I want to know what is realistic for the SCSI from an MDOS point of view.

,JeffW> What will MDOS do? First, it is my every intention to use the SCSI on the Geneve. I told Beery that I questimated MDOS would only need 4K reserved for link code to the SCSI EPROM. The EPROM would handle everything on the Geneve the same as on the TI. I detest the way the HFDC works differently (but not better) on the Geneve in comparison to the 99/4A. On the 99/4A, the HFDCC EPROM does not support the complete HFDC spec as outlined by MYARC.

,Dano> ! Me too! Especially in regards to the differences between the way MDOS/MDMV make and delete directories.... NOT MIX and MAtchable!

,JeffW> This causes many headaches when taking a drive used on a 4A to a Geneve. The 99/4A only depends on forward search pointers. The Geneve uses both forward and backward links. Unfortunately, the 99/4A does not create the backward links properly. SCSI will do the complete spec. Of course, I hate the way low-level floppy code is not complete on the Geneve GPL side. And Beery said he could not fix it.

FDOS> If Beery is unwilling to make the changes to MDOS to support SCSI, would he be willing to supply updated MDOS source code to someone who would?

GREGRPH> Jeff, you mentioned earlier that the 4 gig limit could be enhanced with an extension to the hfdc dsr. If that was done, would that make it totally incompatable with the hfdc or just make the hfdc limit 4 gig and the scsi limit higher?

,Dano> ! One really nice feature of SCSI (Iffen it is ever finished ). The DSR code will reside in an eprom on the card and not chew up valuable CPU ram.....

,JeffW> The HFDC limit is 124 Meg. 124 Meg is really nowhere close to 4 GB. With an update to the HFDCC EPROM, larger devices could be handled.

,Dano> ! Now, Mdos loads the DSR code for 3 different rs232 and 3 different disk controllers, rather than just loading the one it wants/needs ...

GREGRPH> Would the dsrs be the same to point and the scsi extended or would the dsr be totaly incompatable? Required information being in different locations from the other systen?

,JeffW> They would be compatible.

,JeffW> What this SCSI developer wants is for any program written to use the HFDCC via DSRLNK to work without modification with the SCSI. All the extensions to the HFDCC data structures to support partitions on SCSI are external to the HFDCC data structure. You can think of each partition on a SCSI device as an HFDCC data structure.

GREGRPH> That would mean then that the mdos dsr would work to a





point (124meg) but it would need to be enhanced to access more information?

,JeffW> Not necessarily. Partitions may be treated as what I call "dummy" devices. So accessing WDS1. from MDOS (okay, maybe HDS1.) would be accessing the first 124 Meg. But if the second partition is named GIF, it would be accessed as GIF. Because of the way the hardware was intentionally designed by Don O'Neil and me, we can add device names -- and the DSR could handle them as actual partitions on the drive.

,JeffW> Brad, do you have additional comments on this?

,Brad> I would like to see the partitions accessed as logical devices. But accessing them as subdirectories will also work OK.

,JeffW> In MDOS, try this sometime: DIR GIF. MDOS will return a device not found error. If MDOS had support for external DSR linkage, it could find a partition as a logical device. As I have stated, we are going to do our utmost to keep the EPROM Geneve-compatible with minimal additional code needed for MDOS.

,Brad> I just hope that someone is available to modify MDOS to work with SCSI.

,JeffW> I assume everyone who has showed tonight actually owns a SCSI card.

FDOS> I do. RMARKUS> I do. It is still in the box.

RMARKUS> yep.

,JeffW> Should I go to my questions left in the forum? The first question was how can SCSI DSR developments help Geneve users. er, HFDC users. The obvious answer -- when the SCSI DSR is complete and downwardly compatible with the HFDCC specs, the code may be ported back to the HFDC to remove its annoying bugs.

FDOS> That would be great!

,JeffW> I receive payment for SCSI work. If it can help me (or someone else) correct the HFDCC deficiencies, that will benefit me.

,Brad> How much room is there on the HFDC for the DSR? 32K?

,JeffW> The HFDCC DSR has 16K in 4K pages at >4000-4FFF. It has 8K (upgradable to 32K) SRAM at >5000-5FFF in 2K pages.

,Brad> Oh, OK. We got lots more to work with! (with SCSI)

,JeffW> SCSI has 64K EPROM (can be piggybacked to 128K) and 32K SRAM (piggyback to 64K). The low-level code for SCSI is much, much simpler than comparable code on the HFDCC -- partly because many chip-levels bugs had to be worked out on the HFDCC.

,Tim> (HFDCC's RAM is banked in by 1K pages, page 0 is fixed)

,JeffW> You are right, Tim. And the HFDC RAM cannot easily be used for external code -- it is mainly disk buffers and relative pathname information. The SCSI hardware has what I think is a cleaner DSR interface.

,JeffW> On to my next question... What benefit will the SCSI DSR development be to people who have no plans to ever own a WHT SCSI? There are several possibilities. First, HFDCC owners may be surprised with an updated DSR that corrects present bugs. But that was the answer to the first question. The SCSI low-level code can handle various sector sizes. With such utility on the HFDC, PC hard drives could be read with sector I/O. And written. Of

course, code to understand the PC formats would require more memory. In a similar vein, the double density floppy controller DSR's could be upgraded (though this is less likely).

,JeffW> The WHT SCSI specifications are part of the driving force for the proposed high-density formats Mike Maksimik has mentioned in TI Echo. Essentially, SCSI development could benefit the users of other disk controllers by bringing everyone into a consistent, superior specification. As Brad demonstrates with his willingness to port XB Packer to various memory systems, so do other coders like milking their code for all it is worth. Of course, the SCSI DSR will also simplify the writing of the 4A MEMEX DSR, because much of the high-level access for RAMdisks will be similar. Any comments, suggestions, or questions on this answer?

,Tim> C: 800K+ RAMDISKS also fall into this category..

FDOS> All sounds great, but "when" is the big question?

,JeffW> When? ASAP. If you read Beery's recent message to Brad that I brought back to Delphi, you might see some of the problems of development.

,Brad> :-) I should be coding right now! :-)

FDOS> ASAP is the same as Myarc's two weeks.

,Brad> At least ASAP is the -truth-.

FDOS> Ah so!

,JeffW> There have also been some personal (personnel) problems. Let's just say it took me longer to get a hard drive than it took Beery. Which brings up another question of mine. How do you get your money back for the WHT SCSI?

FDOS> Costly paper weights are my concern. AKA Geneve and now maybe SCSI

,Brad> We will change that!

,Tim> Fortunately, yours functions :)

,JeffW> I am sure that anyone unhappy with their SCSI card can get their money back by requesting a refund from Bud Mills.

FDOS> How can anyone be unhappy with a paper weight? No matter the cost.

,JeffW> Yes, you knew it was a paper weight when you bought it. But the card will work when the DSR is complete.

FDOS> Just a glutten for punishment, I guess.

FDOS> I believe that, that is why I always end up waiting.

CAL47> clarify - will work with which os/sys?

FDOS> I just want it yesterday.

,JeffW> Sure, I am the same way. I purchased an ESD hard drive controller, and have received nothing from Shane Truffer but a letter saying the MFM design was being stalled because parts could not be found. My $225 bought a bunch of hot air, and it won't even pop popcorn. But I digress.

,JeffW> Paying and getting a partial shipment of product is better than nothing, and we are still here and working on completion of the DSR. The product has demonstrably worked.

FDOS> I am still waiting. Nothing else to report.

,JeffW> I am not trying to excuse the delays, but the promise that a DSR or refund will be forthcoming still holds. You must decide for yourself if you can wait until we are finished, or if a refund would make you happier.





FDOS> I usually stick to my commitments all the way to the end.

RMARKUS> and beyond.

,JeffW> WHT, BMS, and I will not hold anyone to their commitments.

FDOS> I want SCSI to succeed.

,JeffW> And your investment in a card will likely help the endeavor.

FDOS> So get back to work on it already!

,JeffW> This conference is actually part of the work -- trying to find out what parts of the SCSI proposals you disagree with, do not think will work, or limit the design.

FDOS> I know this is the wrong attitude, but I have to say "Take the quickest route."

,JeffW> I code on paper before I hit an editor. I hate the hunt and peck method of coding -- "That did not work. What if I change this? That really screws up things. Maybe the first way was better. Where is that original source code."

,JeffW> A reliable, agreeable, provable plan of action is what _I_ think will speed development.

FDOS> Go for it!

RMARKUS> Yea Jeff!

,JeffW> I often have described myself as NOT a programmer. Programmers in general use the hunt and peck (seek and find) method I briefly described. I code. I am a coder.

FDOS> I'm not so serious, I hack at it.

,JeffW> I will try at minimum 3 ways of doing things on paper before I ever put code into an editor.

,Tim> It also depends on what is needed. I do both (paper and computer), sometimes at the same time. Different levels of complexity and foresight dictate how I write code.

FDOS> I just have mental arguments with myself.

,Tim> Those are the best kind - you always win. :)

,Brad> Me too, Tim. I need some sort of diagram for complicated routines, but I rarely write the actual code on paper.

FDOS> Forth lets me do it my way.

,JeffW> Some do not think writing out objectives is beneficial. However, the SCSI proposal compilation was posted to get feedback, and feedback will speed progress in the right direction -- which is the direction potential SCSI customers want it to be.

HOMZA> I know I missed the beginning of the conference, but whatever you guys decide, please make it TI/Geneve compatable. Otherwise, ... well you know. It's getting late now and the Yankee game is getting good. Be signing off soon, BYE.

,JeffW> Certainly, John, that is the main objective.

,Tim> Basically, there are times when I NEED a computer to type in an idea, as some items only work if I get 'em down quick and in proper "syntax". Hunt & peck, code on paper, argue mentally... They all end up with the same result. (hopefully)

,JeffW> I do not believe that statement, Tim. I have seen way too much bloated code.

,Brad> We have 64K to fill. :-)

FDOS> I know what you mean Jeff. Forth really cuts down on the bloat.

,JeffW> Note that a SCSI driver for OS/2 requires in the range of 200K.

FDOS> That's incredible!
,Tim> Hunt & peck does not neccessarily mean you will end up with bloated code. You can 'code' on paper and write something truly horrendous.
,JeffW> Yes, Tim, but I usually realize it is horrendous before I assemble/compile and test. I do not mean to be down on all who use the hunt and peck method. But something is normally overlooked in the process.
,Tim> True, but sometimes at least those that hunt&peck (and I use the term loosely) have something to show for their efforts and the progress(?) they've made.
,JeffW> So the code bloats to take care of exceptions produced by bad code.
,Tim> Depends how much hunt&peck was performed. :)
FDOS> Are we done with SCSI conference?
,JeffW> Well, do you have any comments on the proposed specification, Bill? I am sure a transcript will be uploaded, but I must say I wish we were getting more feedback.
FDOS> I wish you could go all out and do everything, but we know that will take too long.
,JeffW> It will not take "too long" if the plan is sound.
FDOS> You have to get something out to us impatient lunatics ASAP.
,JeffW> Perhaps it was naive of me to think providing an opportunity for input on the SCSI DSR development would be beneficial to it.
FDOS> I think everyone thinks now is too late for having imput. This conference should have happened 6 months ago.
,JeffW> I do not think it is too late.
FDOS> Everyone has been expecting since Chicago to get a DSR for their card.
,JeffW> 6 months ago was about the time of Fest West.
FDOS> Now we discover we can have imput at this very late date. That means we will have to wait another 6 months for a DSR.
,JeffW> How do you estimate 6 months?
FDOS> I meant two weeks Myarc time.
,JeffW> Bill, I get the feeling you are upset.
FDOS> No! Just impatient.
,JeffW> What if I said right now that if we do not get input on the proposal, we will just drop SCSI development to the bare minimum, forget about HFDCC-compatibility, and let that be that? That is an option left open by the proposal.
FDOS> HFDCC compatibility has to be the most important priority.
,JeffW> Why?
FDOS> I know that makes the task more difficult, but too many people would be upset. More incompatible hardware for us TI/Geneve users.
,JeffW> The major market for the SCSI card is the 99/4A without a HFDCC. There are only 2000 or so Geneves out there, and many are likely not used.
FDOS> You have to decide what your market is and what you have to do to get the most from it. I only told you my opinion, and you know my time is spent on the Geneve.
,JeffW> If there were no Geneve, HFDCC-compatibility would likely not even be a concern. Paul C said at one time more Geneves were sold than HFDCCs. And if we wanted, we could port a non-HFDCC compatible DSR to the HFDCC. Which might





please everyone but Geneve owners. Understand, SCSI is an ambitious project made more difficult by the existence of the Geneve and HFDCC. With the release of MDOS 1.50H, we may have Geneve-compatibility.
,Dano> 1. Are the SCSI controllers currently for sale? 2. How many where made in the first run and 3. How big of an existing market do you see for them?
,JeffW> Ask Don O'Neil or Bud Mills. The answer to such questions is beyond the scope of this conference. My best answers: (1) No. (2) 50. (3) no idea
FDOS> Could you tell me what Paul C said?
,JeffW> Paul C said that more Geneves were sold than HFDCCs.
,Dano> Tim probably knows how many Geneves and HFDC's where sold. He has fixed all of them at least once!
FDOS> My two HFDCCs have never been repaired. One was upgraded by Cecure.
FDOS> Ok. Like I said earlier, you have to decide where your market is.
,JeffW> That is what I do not know and cannot get an answer to.
,JeffW> Repeat of earlier statements: If we wanted, we could port a non-HFDCC compatible DSR to the HFDCC. That would please probably everyone but Geneve owners. SCSI is an ambitious project made more difficult by the existence of the Geneve and HFDCC.
,Tim> Jeff, has a plan of attack been presented to those present (I missed the first 40 minutes of the CO) ?
,JeffW> A plan of attack?
,Tim> Yes. The various steps to be taken for completion of the SCSI DSR.
,JeffW> Unless we get better suggestions or objections to the proposals as outlined, I figure that pretty much explains the plan of attack.
,Tim> The proposals are fine; however, a time-frame for completion of various aspects of the DSR is needed and/or desirable for those investing time and $$.
FDOS> I would agree Jeff.
,JeffW> I sometimes get the feeling everyone wants me to dictate how things will work.
FDOS> What an opportunity Jeff. Take the "Bull by the horns", so to speak.
,JeffW> I would think from history, folks would remember how MYARC dictated direction and how several people were upset with the outcome.
,Tim> Even a working SCSI DSR without the bells and whistles (but with 'hooks' to add them) would be welcome by many if not all, considering the comments I have received since you posted the 'proposals'.
FDOS> I think you know Jeff, that is how it always works. No one will say anything until after you have done in a way they don't like. Live with it.
,JeffW> I have given as wide as audience as possible to what I hope we accomplish in order to greaten interest in the development. You have received comments, Tim?
,Tim> Yes.
,JeffW> Why didn't I get any?
,Tim> Possibly because I talk with a number of people through my association with the S&T BBS...
FDOS> It 's a great plan Jeff. Can we have the final DSR by

next week?
,JeffW> The article was left in public in the hope it would generate some public discourse.
FDOS> It's a lot to munch on for some of us novices.
,JeffW> I should have invoked names. Mention someone, make him feel important or insulted, and he will respond.
FDOS> That doesn't always work either.
,Tim> Unfortunately for many, the ideas presented are a bit complex and a lot of material to digest, especially if those reading it do not fully comprehend the HFDCC specs, which the SCSI proposal is partially built upon.
,Brad> I have a feeling that most people don't care -how- the DSR works. Just so that it does work.
,Tim> (Mostly for maintained compatibility)
FDOS> Yes, Brad, I think you are right.
,JeffW> Most programmers or coders should be concerned with the way it will work.
,Tim> The programmers are not the majority of the user base.
FDOS> This is also true Jeff, but many of us or them are very busy with other things. They may not have the time just now.
,JeffW> But programmers are the majority of the network user base.
,Brad> Right Tim, and programmers will just work with whatever is finally available.
FDOS> I agree. If it works well and has very good documentation, I can live with it.
,Brad> I don't know if this is a good example, but I wrote XB/Packer to work with the AMS as it was presented. I don't care if it had a DSR or not, or how the mapper is accesses. As long as the info is available, I'm happy.
,Tim> True, Jeff, but how many are truly concerned with disk data structures? I only bring up the point to demonstrate that the lack of response is not due to a noncaring attitude; rather, people find it too much to bear. They've waited long, the want the DSR, they want it now.
,JeffW> Tim, can you tell us what type of comments you have received?
,Tim> Yes, Jeff, here are a few:
1) Previously mentioned - desire of an 'attack plan'.
2) Start with an HFDCC-compatible model and expand from there. Why?
   a) People want SCSI to work
   b) Those investing the money will not immediately buy a 4 Gbyte drive, they would be happy with 40-80 meg right now.
   [.Brad> ! I'll bet that extremly few people would need more than 80 megs.]
   [.Tim> Quite a bundle at this point in time.]
   [FDOS> I'm looking at 640 Meg drives.]
3) Keep the proposed architect, but use only ONE partition. We have the capability of 248 meg (maximum AU/sector) for that partition.
4) Those I talked to that had or want a card are willing to wait for upgraded EPROMS if it will get them a working card.
5) Update reports (not heresay) is vital. Reports in MP saying SCSI will be complete in 'x' number of months does not cut it. This was supposedly done according to Feb. 1993 MP editor note.





-- That is most of the response - if I think of anything else, I'll post it.
FDOS> That is the Myarc syndrome at work, just another two weeks and it will all be done.
,JeffW> Okay, I will comment on those points.
,JeffW> (1) The attack plan can now be devised with the working SCSI proposal out in the open. (2) The model in the proposal has HFDCC-compatibility as the baseline. (3) One partition is easily supported. It is the format for flopticals and high density floppies. (4) I have not the time to support several versions of the SCSI EPROM. When the SCSI project is done, 4A MEMEX becomes priority. (5) Update reports that have been published in MICROpendium were done without much say from me. They were guestimates by Don and Bud, neither of who is on the software development team.
FDOS> Good plan. I say, "go with it".
,JeffW> No one can fully understand the several positions I have been put in during development.
FDOS> I' m sure of it. Great expectations and all in two weeks.
,JeffW> I have no control of the marketing.
,Tim> I have a comment or two yet..
,JeffW> I would personally like to see actual numbers for how many have put themselves on the SCSI waiting list.
,Tim> For SCSI to become reality, we need to perform a lot of coding, hunting, pecking, screaming, or whatever. At this point in time, I seriously doubt that an EPROM would be finished by 1994. I <could> see a basic EPROM being ready for use by Chicago if everything continues to progress as planned. But to come out with one EPROM that does everything is demanding too much, too soon. A step-by-step progression would be the best way all want, but there is nothing wrong in doing so. It would at least put back some of the 'trust' in the project itself.
,JeffW> I am not unagreeable to that.
,Tim> Any comments, Brad?
,Brad> No, not really. I'm in agreement with what you've said.
,JeffW> But I want you and Brad to understand, as soon as a SCSI DSR is out, Don O'Neil will likely put me on the 4A MEMEX DSR. It has been a major hassle for me to keep up with all the various projects with non-TI/Geneve concerns to handle in addition. This is why I was never adverse to adding more coders to the project.
,Tim> True, but that is in the future; the SCSI is needed now. I seriously believe DonO needs to look at what he is doing before another 'mistake' is made.
,JeffW> Tim, I do not want to be the cause of further delay. However, I think we need to be very careful what we release. DonO has made many claims to what the SCSI will support.
,Tim> I understand your concern. You are not the person to hold responsible as far as I've been able to determine.
,JeffW> I have concentrated my efforts trying to figure out a workable solution to compatibility issues.
,JeffW> Don was on tonight, but not in conference. Have you and Don discussed SCSI matters recently?
,Tim> I also believe we must be VERY careful. But understand that there are times when cautiousness is not the way to

make progress; but it is not to be left behind, either.

,Tim> No, I have not talked to DonO since the CO in May where we 'hashed' through what became the proposal.

,JeffW> His low-profile does not help matters.

,Tim> How much have you written down (coded), detailing the data structures, subprograms, I/o handling, etc.? 2) How much presently is coded but not on paper? 3) do you have anything that we can build on, besides the low-level routines? 4) Do you want me to start writing some general i/o descriptions, particularily detailing what is being written, perhaps on a weekly/biweekly basis, to better show the community that progress is being made?

,JeffW> (1) I have several pages detailing data structures, etc. Much of this was put into the proposal posted. (2) what has been coded is additional low-level support -- on paper (3) I have other DSR source codes, but I am not particularly overjoyed at the prospect of duplicating their bugs.

,Tim> c: using 'other' source code would be unwise anyway...

,JeffW> (4) If you could do that, Tim, things might move more smoothly. You would likely get more response than I. BTW, do you have any comments on the recent Emails I sent. Like the handling of partitions and emulations as devices? Or would that be overkill for the first release?

,Tim> I will. I have to purge my mailbox tonight before Delphi charges me - it is QUITE FULL. I will scan over the mail in more detail then.

,JeffW> I suppose this closes the conference. How did it go?

,Tim> I think the difference of opinion in some areas, genuine as it is, will keep things running smoothly. If we all did everything the same way at the same time, two of us would be quite unneccessary.

,JeffW> Yes, maybe Brad and you can tone down my grander visions.

,JeffW> I thought Tony McGovern might show up tonight. He says he will be digesting the proposals more and sending comments.

,Tim> I see no problem with the 'grander visions'. I _do_ see a problem getting everything done within a two-three month time frame. Each of us has a lot more to be concerned about than the TI community, as calous as that may sound.

,JeffW> Agreed. But SCSI customers do not want to hear that.

,Tim> Exactly. There is one thing [we don't need:] 'projected time to completion' announcements.

,JeffW> However, [Bud and Don] are in charge, and do what they want. Which does not mean we do what they say.

,Tim> Here's part of my <our> problem.... I talked with one person in Oklahoma about the SCSI card. Bud is either telling people it will be done before Chicago or is hinting strongly at that notion.

,JeffW> It is actually quite difficult to estimate a time frame for completion unless I can schedule certain blocks of time for a project -- which is something I have never been able to do. I think I said in the preface of the proposal that every effort would be made to have something to show at Chicago. But I made it clear at the beginning that the article was not projecting a completion date. I am not sure the article has even been seen by Bud or Don, or if





they have heard of it.

,Tim> If the basic routines are coded - and people can actually see a file being loaded and saved, even if it is just a demo, it would be very worthwhile. The users need to see it work in an environment they can relate to.

,JeffW> If it works as promised, I think everyone will want one. : )

,Tim> :)

,Tim> I do have an idea if you have not done anything similar yet... I'd like to get a list of commands, including the current HFDCC opcodes, which will (or could) be used with the SCSI DSR. Based on the general description, a 'top-down' approach to writing out a step-by-step algorithm for each operation should be written for aid in coding. This will allow us to find common routines and keep coding to a minimum. In addition, such a structure would lead to more detail, barring any problems, of the new partition structure we so far plan to implement.

,JeffW> Sure, go for it. I have been concentrating on changes to the low-level code. Figuring out how the memory will be used. The low-level code will need changes to powerup, etc. to handle configuration of memory. I actually like the idea of having partitions in the device link. And obviously the way to check for a non-partitioned drive is to look for WIN in the VIB.

,JeffW> Just making comments on what I have been looking at.

,Tim> Recall that WIN is not in the VIB - hard drive parameters are stored in those three bytes.

JeffW> Okay. If byte 0 of logical sector 0 is 0, it is a partitioned drive. I checked that WIN stuff, and you are correct. Byte 0 of a non-partitioned drive must be a valid text character.

,Tim> I believe our 'proposal' is in error. I noticed this when trying to determine what was wrong with Mike's CFORM. You just reminded me of it.

,JeffW> Well, I was working from my recollections of what I thought the HFDCC did.

,JeffW> What is our error?

,Tim> I thought [I may be wrong] that we mention the WIN in the proposal as being three ASCII characters, not the hard drive parameters.

,JeffW> Here is the confusion.

,JeffW> We mention that for high density floppies and flopticals, we borrow the hard disk structure and replace the WIN-field with ASCII codes for "HDS". In fact, the low density floppy uses "DSK". So our proposal is sound, but we may have said hard disks contain "WIN" instead of the hard disk parameters. The hard disk parameters are really not useful for HD floppies/flopticals.

,JeffW> Well, the "W" field may be useful.

,Tim> That is probably what was written.

,JeffW> As long as we realize it.

,Tim> Is "W" the number of heads?

,JeffW> "W" is the number of AU's reserved for file/directory headers. Number of heads, etc. is stored in the word after the WIN-field. That word is not really applicable to SCSI either. We could keep the "W" field, and just put "HD" in the IN-field. I think it can be worked out.

,JeffW> What was the problem with CFORM?
,Tim> Over the long haul there were problems with writing to physical sector zero, writing the bitmap, time & date, etc.. it's finished now (finally). I went through the sectors looking for problems, and found the WIN in the process. Anything else we need to discuss?
,JeffW> Well, I just looked at the proposal. It says that for High Density media, the "WIN"-field is replaced with an "HDS"-field. It further states that the 3-letter field is what is used for media typing, rather than the device name. Which makes it pretty handy for a partition volume name to be a "dummy" device. So I guess we were wrong, but we can claim we said what we meant.
,Tim> ;)
,JeffW> It is the "WIN"-field, and the field is described by a 3-letter name.
*** END *** at 00:59:14

# COMMAND MODE PLUS!

----------by Jerry Keisler
from the Great Lakes Computer Group Inc., Feb. 1993

Most use command mode to type in programs. Also to load, save and run programs.

But, did you know you can execute almost any program command in the command mode while in the middle of a program. You can view and change variables. Viewing variables can assist you in determining why a program crashed. Also, long XB lines can be written and executed without destroying the current program. When done, type "CON" and press enter. The program will continue to run using any changes you made to the variables.

The disadvantages to this is all graphics will be lost and the screen will scroll unless it is refreshed by a program command.

TRY IT ! Type in

```
100 FOR I=1 TO 100
110 A=1+A
120 PRINT I;A
130 NEXT I
```

Run this program. Before "I" reaches 100 press FCTN/4.
Type PRINT I;A and press enter.
You will see the current value of "I" and "A".
Now type A=888 and press enter.
The count on the screen will continue from 888 or 889 depending on where you broke (FCTN/4) the program. You could set "I" to a lower number or higher number before typing CON. See what happens when "I" is outside the 1 to 100 range.
When the program ends, *READY* appears.
Type PRINT I;A and press enter.
You will see the exit value of the variables.

---

LET's TRY ANOTHER ONE.



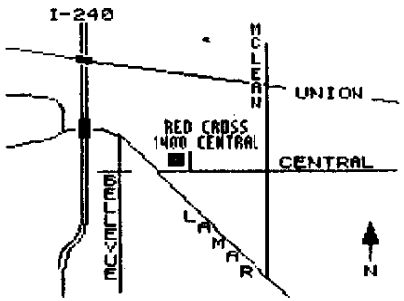


```
100 C=1
110 A$= "START OVER"
120 DIM X(40)
130 FOR I=1 TO 40
140 X(I)= INT(RND*200)+C
150 PRINT I; X(I)
160 NEXT I
170 PRINT A$
180 GOTO 130
```

This program will put a number between 1 and 200 in variables X(1) thru X(40). Run the program and press FCTN/4 when "I" reaches or passes 40.

Type
FOR B=1 TO 40 :: PRINT X(B) :: NEXT B and press enter.
You will get a list of what is in X(1) thru X(40) to screen. If you have a printer and want a printout of X(), assuming you typed the FOR B line, press FCTN/8 to retireve the last line you typed and edit it to read
OPEN #1: PIO" :: FOR B=1 TO 40 :: PRINT #1: "N"; B; "="; N(B); :: NEXT B :: CLOSE #1
Your printer will print X1 = 186 X2 = 192 etc. Use RS232 in place of PIO if required by your printer.
Type CON and press enter.
The program will continue where it left off.
Type FCTN/4, C=1000, press enter. Type CON, press enter.
Try FCTN/4, A$= "END OF LINE", press enter. Type CON, press enter.
DO NOT CHANGE ANY LINE NUMBERS OR ANYTHING IN ANY LINE OF THE PROGRAM IF YOU WANT TO USE THE CON COMMAND.

If the program crashed with an error statement, you can still view current values.
Change line 120 to
120 DIM X(30) press enter, type RUN and press enter. The program will run a while then say "BAD SUBSCRIPT IN 140".
Type
140 and press FCTN/4
"140 X(I)= INT(RND 0)+C" will appear, press eneter.
Print the values of all variables in this line by typing
PRINT C; I; X(I) and press enter.
You will see the current values of C, I, and BAD SUBSCRIPT. "I" equals 31 but our dim statement said DIM X(30). There is no X(31). We either have to increase the DIM statement or reduce the FOR I statement.
You can see any program line using line # and FCTN/X before viewing or changing variables.
Hope this is some help to programmers.




## LOCATION MAP

WORKSHOP : to be announced.

## PROGRAM BIT - third Thursday

## SEP 16th , 1993

MEETING: 7:00pm - Red Cross Building - 1400 Central.

6:45pm - Doors Open

7:00pm - BBQ Dinner,
cost will be $3 <-> $5,
bring a desert and get a discount!

7:30pm - Demonstration to be announced.

9:00pm - Meeting ends.

9:15pm - Late dinner at location to be announced at meeting. (anyone still hungry?)





## NOTICE

Information contained in TIdbits is accurate and true to the best of our knowledge. Viewpoints and opinions expressed in TIdbits are not necessarily that of the Mid-South 99'ers. We welcome any opinions/corrections from our readers. Articles may be reprinted elsewhere as long as credit is given to the author and newsletter.

## GROUP INFO

Visitors and potential members may receive 2 free issues of TIdbits while they decide if they wish to join (no obligation) On the top of your label is a code. A Y means you are a member, N means 2 free list, UG means user group and S means a business. Beside the Y is a date, one year from that date your dues are due. A dollar sign ($) on the label will indicate that your dues are due. The library is open only to members. Library list is $1. Mail order disk library access is $2 for the first disk and $1 for each additional disk - max of 5 disks per month. Order by disk number only. At meetings, library access is FREE if you exchange your disk for ours or $1 per disk for our disks. Send all mail order library requests to librarian's address! Send dues and correspondence to group address.

## CALENDAR

MEETINGS: SEP. 16, (3rd Thursday!)
WORKSHOPS: TO BE ANNOUNCED

## 24HR TI BULLETIN BOARD

The 9640 NEWS BBS 300/1200/2400/4800/7200/9600/12000/14400
Hayes. 901-368-0112

## GROUP MAILING ADDRESS

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