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W-AGE/99 \* NEW-AGE/  
99 \* NEW-AGE/99 \* N  
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/99 \* NEW-AGE/99 \*  
~~~~~

* by JACK SUGHRUE, Box 459, East Douglas, MA 01516 *

#2

There's a new (I think) company making software for the TI: Arcade Action, Program Innovators, 4122 Glenway, Wawatosa, WI 53222

They have a nice version of TETRIS. They also have the usual space shoot 'ems. They have a program called Snowmobile which is yet another version of the Regena-style skiing/river-travel manuevering. And they have a bunch of other stuff, all of which is detailed in their free catalog.

But what they have that is WONDERFUL and a true first for the TI Community is a superb cribbage game!

It's perfect in the sense that it is completely playable. It is reasonably fast. It is intelligent and colorful and extremely well designed and in Extended Basic for people who like to add their own little touches, though you won't need to add little touches to this game at all. The unknown author even offers simple suggestions for reducing 11 of its 60 sectors.

There have never been any good, playable TI cribbage games, but this game, called CUTTHROAT CRIBBAGE, is something else entirely. This game not only lets you play against an intelligent computer but allows some interesting inputs. During the game, for example, if you wish to question the computer's judgment (or would like to test out some odd card combos) you simply type "C" for Count Check at the end of a hand (instead of the default "P" for continuing Play). You may then set up a hand, including play card. The computer will score it, explaining each detail. For example, you must type each card with the pip value first and the suit (S,H,D,C) second. A Five of Hearts would be 5H; a Queen of Clubs, QC; an Ace of Diamonds, AD. You get the picture. So take a hand like 5H, JD, 5S, 5C, with the play card the 5D. Any cribbage players recognize the Grand Hand when they see it and know it equals 29, the highest score in cribbage. The computer will tell you this when you type in that hand. It will also break down all of the patterns by individual scores (15s, Quadruplets, His Nobs) to show you exactly how the hand is scored. You can create any legitimate hand you'd like for detailed analysis by the computer. This is a superb help feature, particularly for the novice. The pro will have a good time with this game, too.

On-screen graphics are equal to the best I've seen for ANY card game. The board on the right side runs hand totals to their new mark before filling in the peg area up to that point. There are three rows of 40 instead of the up-down 30/30 of normal cribbage boards; more like the continuous steeplechase boards which are becoming popular.

But what kind of game does it play? It is a very good opponent that knows the rules perfectly. And you better not make an error in scoring or it will call "Muggins" on you and take the points; thus, the name "Cutthroat".

The only cheating I was able to do (and get away with) was to call a Go after a 23 when I had a three left in my hand. I got a point for last card at 23. The computer called Go. I returned Go, though I could

have played. It played a four; I played my three and got another point I certainly did not deserve. But I assume the author did not anticipate sneaky little buggers like myself trying to sleaze through a game instead of playing properly.

Except for the ability to cheat at the Go and the inability (on the computer's part) to note a Skunk or Lurch, this is a fantastic game in every way. **NEW-AGE/99** rates this an A+! It is user-friendly; it is fast (though giving you time to make your crib-throw decisions); it is nice to look at; it is cheap (\$7 gets you this and a couple other programs thrown in; \$10 gets you twice as many games, including AA's TETRIS). The playing field is great. Your six cards are dealt at the bottom of the screen nearest you; the computer's opposite near the top. As you discard by pressing C,D,E,F,G, or H (letters assigned to your cards), the crib will be placed near your cards if you dealt or near the computer's if it dealt. You always know whose crib it is. The play is done card by card in the area between you and your opponent. Just like the real thing. Play scores (15, Run, Go, 31, Pairs, etc.) are all announced and scored during play. In addition to the multi-colored pegging "board" on the right, individual totals are kept in boxes next to each player. There is never a moment of confusion in this game.

At the conclusion of play, the hands and crib are spread out for analysis before scoring. Bear in mind that the computer's scoring is never wrong. All combos are sitting quietly in data statements just waiting for you to score incorrectly. If you do, you get zapped. You can never perform "Muggins" on the machine, but sometimes its play isn't as sharp as your own under some odd play moments. It isn't as wise as some of the best cribbage players I've ever played. (My father, for instance, or my daughter Sue. Or an old Army buddy, Emil, from my days in Germany.) On the whole, though, ~~Cutthroat~~ is a worthy opponent, and, as cribbage cannot be played over the phone or by mail the way chess can, this is the next best thing to a human opponent. In some ways, better. It is 3:30 AM right now. I woke and danced The Insomniac's Waltz before settling at my computer. I popped on cribbage. Won two games. Felt good. Decided to write this column, which had been back-burnered for a couple weeks. Who else could I have gotten to play cribbage after 3 AM? And accept defeat so graciously?

Hey! Wait a minute! What if you don't play cribbage? Well, for one thing, you must have had a deprived childhood (and continually deprived adulthood) as cribbage is such fun! It's one of the few card games whose origins are known. It was created by the English gambler, soldier, poet (Why so pale and wan, fair lover? Prithee, why so pale?) Sir John Suckling (1609-1642). It's come down to us across the centuries virtually unchanged. The English still play the 5-card version, the Americans play the 6 (a variation of this century that caught on permanently in spite of considerable criticism by purists).

Anyway, if you don't play, get someone to teach you or get a Hoyle's and, with Cutthroat in front of you, teach yourself. This game makes it easy, particularly with the option of creating any hands you want to learn to score.

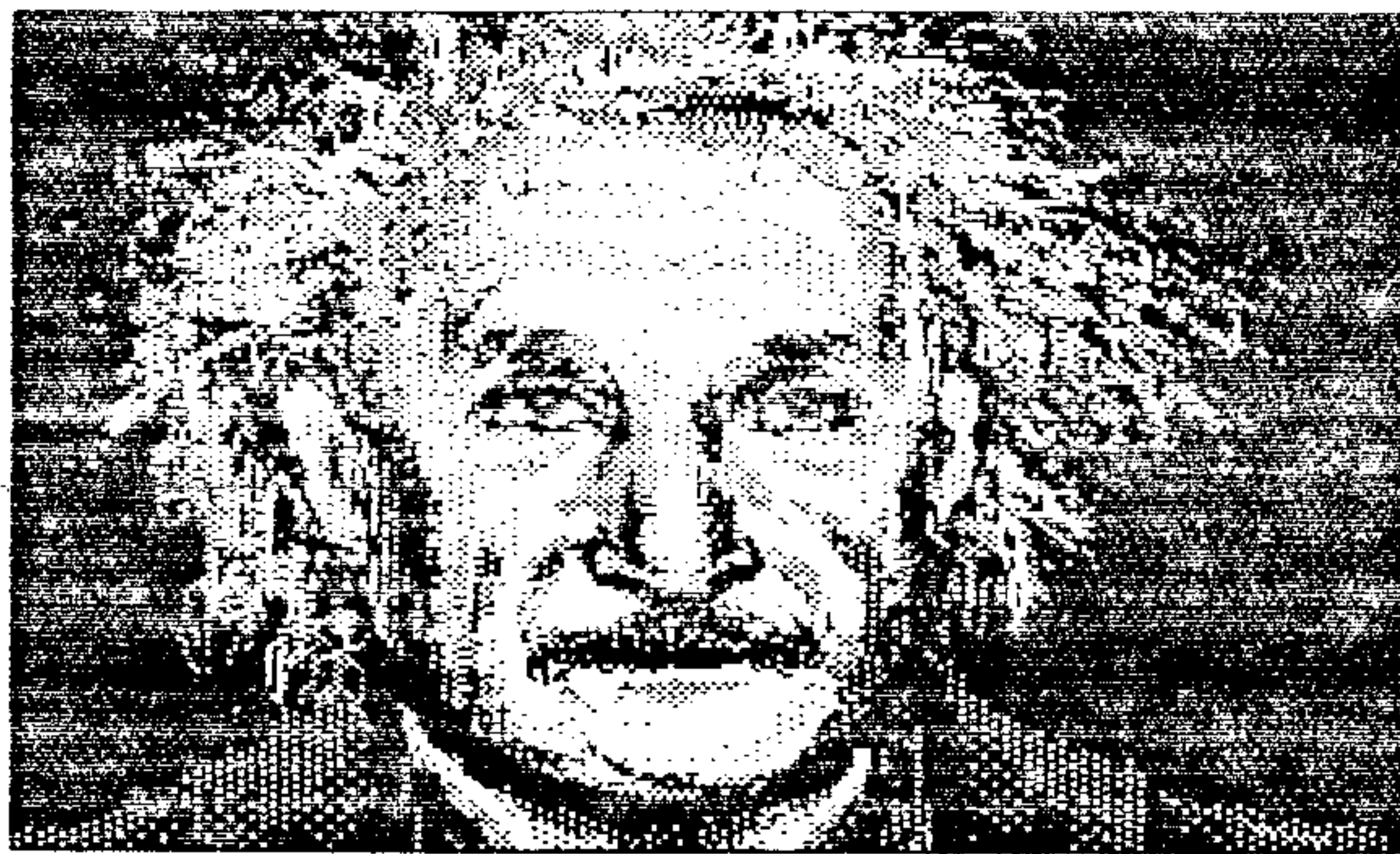
My fifth-grade students play it constantly and are even beginning to beat it almost as often as it beats them. Great learning tool.

Finally, at game's end, there is no gloating. The screen fills with "YOUR VICTORY" or "MY VICTORY" without the obnoxious toots, plunks, and burps that usually accompany such announcements. Very professional.

Now for those times when the urge of the cribbage addict comes upon you and no one is around to play, just pop a Foster's, turn on your friendly TI, and go to it.

[If you use NEW-AGE/99 please put me on your exchange list.]

Albert Einstein



"GREAT SPIRITS HAVE ALWAYS ENCOUNTERED
VIOLENT OPPOSITION FROM MEDIOCRE MINDS."

WEST PENN 99'ERS

I needed that month off. I mentioned in November that we'd deal with spacing paper in PRINTERS #4, so here goes.

The most common spacing is 6 lines of print per vertical inch of paper. Most printers manufactured today can have that adjusted to just about any increment that you could want. Below are several interesting options and results. Try them on your printer, and look at your appendix on Control Codes to adjust the codes to your particular printer.

**** LINE SPACING ****

```

100 T=39 ! T=TAB POSITION
110 OPEN #1:"PIO"
120 FOR I=1 TO 20 ! INCREMENT
130 T=T+1 ! JUST TO MOVE EACH LINE RIGHT
140 PRINT #1:CHR$(27);"A";CHR$(I);
150 PRINT #1:TAB(T);I;"/72 INCH LINE FEED"
160 NEXT I

```

1234567891011121314151617181920
 6 / 72 INCH LINE FEED
 7 / 72 INCH LINE FEED
 8 / 72 INCH LINE FEED
 9 / 72 INCH LINE FEED
 10 / 72 INCH LINE FEED
 11 / 72 INCH LINE FEED
 12 / 72 INCH LINE FEED
 13 / 72 INCH LINE FEED
 14 / 72 INCH LINE FEED
 15 / 72 INCH LINE FEED
 16 / 72 INCH LINE FEED
 17 / 72 INCH LINE FEED
 18 / 72 INCH LINE FEED
 19 / 72 INCH LINE FEED
 20 / 72 INCH LINE FEED

THE PROGRAM ABOVE PRODUCES THE PRINTOUT ON THE RIGHT. YOU OF COURSE WILL NOT NEED THE LOOP TO PRODUCE YOUR RESULTS BUT IT CAN HELP YOU CHOOSE WHICH SPACING YOU MAY NEED. THERE ARE THREE PACKAGED COMMANDS IN MY EPSON COMPATIBLE THAT SELECT 8 LPI OR 6 LPI OR A SPACING THAT WILL PROVIDE GRAPHICS WITH NO WHITE LINE. THESE ARE RESPECTIVELY CHR\$(27);"0"(8 LPI) CHR\$(27);"1"(6 LPI) AND CHR\$(27);"2"(7/72" GRAPHICS). IN THE PROGRAM ABOVE ONLY LINES 110 AND 140 ARE NEEDED TO SET UP THE PRINTER.

**** PAGE LENGTH AND CENTERFOLD ****

```

100 OPEN #1:"PIO"
110 PRINT #1:CHR$(27);"C";CHR$(5)!LINE UNITS PAGE LENGTH
120 FOR I=1 TO 2
130 FOR J=1 TO 3
140 PRINT #1:"PAGE ";I;" , LINE ";J
150 NEXT J
160 PRINT #1:CHR$(12)
170 NEXT I
180 PRINT #1:"PAGE 3"

```

PAGE 1 , LINE 1
 PAGE 1 , LINE 2
 PAGE 1 , LINE 3

 PAGE 2 , LINE 1
 PAGE 2 , LINE 2
 PAGE 2 , LINE 3

THE PROGRAM ABOVE CREATES THE CONTROL OVER PRINTING TEXT ON A PAGE BASED ON THE NUMBER OF LINES DESIRED ON A PAGE. THE COMMAND IN LINE 110 SETS THE PAGE TO FIVE LINES ONE AT TOP AND ONE AT THE BOTTOM ALLOWED FOR THE CENTER-FOLD SO THAT YOU WILL ONLY GET THREE LINES PRINTED PER PAGE. YOU CAN SUBSTITUTE SIXTY-SIX LINES IN PLACE OF THE FIVE TO SEE IF IT WILL SPACE CORRECTLY FOR YOUR PAGE. CHANGE THE 3 IN LINE 130 TO A 64 IF YOU WANT TO RUN THIS PROGRAM FOR THAT TEST.

**** FOR FUN CREATE A SPECIAL GRAPHIC CHARACTER ****



```

100 OPEN #1:"PIO"
110 PRINT #1:CHR$(27);"K";CHR$(8);CHR$(0);
120 PRINT #1:CHR$(48);CHR$(16);CHR$(30);CHR$(241);CHR$(2);CHR$(241);CHR$(174);CHR$(128)

```



THE PROGRAM ABOVE CREATED THE SMALL "JFW" YOU SEE IN AN 8x8 SQUARE GRAPHIC CHARACTER. YOU NEED TO FIRST DESIGN YOUR CHARACTER AND THEN FIGURE THE BINARY WEIGHTS AND THEN PUNCH THEM INTO LINE 120. PLAY AROUND WITH THIS UNTIL WE SEE EACH OTHER AT THE JANUARY MEETINGS. USE THE DECODING CHART ABOVE. ML

TI-99/4A / Geneve 9640 quiz
by Mike Dodd

May be freely distributed provided the file is distributed in full and without modification. Credit must be given to Mike Dodd and Delphi's TI Net.

This quiz is designed to test your knowledge of the TI/9640 computer community. Some of the questions will be more difficult than others. Scoring information is at the end of this file.

- 1) Most TI users do not watch soap operas because:
 - a) The average TI user does not have time.
 - b) The average TI user is above watching soap operas.
 - c) The infighting in the TI community is far more fascinating than a soap opera.
- 2) Home Computing Journal was an attempt by Gary Kaplan to:
 - a) Produce a timely, informative magazine covering many computers.
 - b) Help human-kind by advancing computer literacy.
 - c) Make tons of money and skip town fast.
- 3) TI's departure from the computer community was most probably due to:
 - a) A failure to promote the advanced hardware of the TI-99/4A.
 - b) A failure to communicate between engineering and marketing.
 - c) A failure to comprehend just how bent on revenge Jack Tramiel (then-owner of Commodore) was.
- 4) Delphi has attracted many of the top programmers because of:
 - a) The ease of using Delphi.
 - b) The friendly people on Delphi.
 - c) Jeff Guide's willingness to give out free flags.
- 5) MYARC's most probable response to a user's complaint that his machine is not working is:
 - a) Check all of your connections and clean the contacts.
 - b) Send it in right away; we'll fix it.
 - c) It's a software problem -- wait for the next system release (two weeks).
- 6) HyperCopy was created because:
 - a) The author had an earnest desire to produce quality software.
 - b) Many users had requested such a program.
 - c) The author was broke and loathed the idea of working for MacDonalds.
- 7) CorComp's problems were due to:
 - a) Unintentional corporate mismanagement.
 - b) Evil spirits bent on destruction that invaded their products.
 - c) Simple dishonesty.
- 8) A certain TI company isn't going to be mentioned in here because:
 - a) It is a great company.
 - b) I'm a good friend of the vice-president.
 - c) I don't want to be sued.
- 9) Terrie Masters is one of the most respected members of the TI community, due to:
 - a) Her incisive commentaries on current events.
 - b) Being editor of one of the largest TI newsletters.
 - c) No sane person would dare cross her.
- 10) If MICROpendium reviews several programs, all of which get high marks, it is:
 - a) Due to the sterling quality of all TI programs.
 - b) Because the excellent documentation far makes up for any shortcomings in the program itself.
 - c) A typical issue.
- 11) Most programmers await Harry Brashear's articles and reviews with:
 - a) Great anticipation due to his skill as a writer.
 - b) Complete apathy.
 - c) A plane ticket to New York and automatic fire arms at the ready.
- 12) People await each new release of Telco with:
 - a) Eager anticipation, recalling the new features the last update offered.
 - b) Hopefulness that it will add script capability.
 - c) Dread, recalling how long it took to download that thing the last time.

- 13) People await each new release of Funnelweb with:
- Eager anticipation, recalling the new features the last update offered.
 - Hopefulness that it will add some of your requested new features.
 - Dread, thinking of what a pain it will be to update all your disks.
- 14) The biggest cause of delays in releasing programs by Paul Charlton is due to:
- His desire to eliminate all bugs before release.
 - His desire to add as many features as possible.
 - His dread at the thought of having to write documentation.
- 15) TI owners criticizing others for buying non-TI computers are most similar in amount of zeal to:
- Ronald Reagan criticizing Russia.
 - Michael Dukakis criticizing George Bush.
 - Ayatollah Khomeini criticizing Salman Rushdie.
- 16) Mike Dodd's typical reaction upon opening a letter and finding the word "PRBASE" in it is:
- "I sure hope I can help this person."
 - "<sigh> Another one."
 - "Aaaaaaaaaaaaaarrrrrrrrrrggggggggggghhhhhhhhhhh!!!!!!!!!!!!!!!"
- 17) Paul Charlton's GIF and Picture Transfer programs have made the most money for:
- Paul Charlton.
 - Genial Computerware.
 - CompuServe, who suddenly had several hundred people downloading huge picture files (in number probably about twenty times as many people who actually paid for the fairware version).
- 18) When people ask how to access the low level disk I/O functions, it is usually because:
- They are on a constant quest for new knowledge.
 - They are interested in trying to gain more speed from their disk controller.
 - They want to break every copy protection left in existence.
- 19) MYARC probably increased the price on their HFDC card:
- Due to rising chip prices.
 - Because of the decision to add a tape backup circuit.
 - Just for the hell of it.
- 20) This entire quiz was written:
- Because the author wished to write a short humorous article.
 - It was an English assignment.
 - The author felt guilty about not uploading anything to Delphi in a while.

SCORING INFORMATION:

In case you haven't noticed, the correct answer is (c) on every question. Note: if you looked at this section first, then you obviously deserve more points than those who played by the rules (which is boring anyway). Give yourself something that is somewhat more than 20 points.

<u>Correct</u>	<u>Diagnosis</u>
0	You obviously have absolutely NO sense of humor. Get one.
1-5	A start, but you're still probably a boring person.
6-10	Maybe watching something funny (e.g. The Holy Grail) would help.
11-15	Maybe you're mentioned in this quiz and weren't flattered...
16-19	Excellent! You have obviously kept up with the comings and goings in the TI/9640 community carefully.
20	You cheated.
21-	Since you obviously REALLY cheated, go treat yourself to something really nice you need it bad.

FROM: N.H. 99ers'

DISK DOCTOR

Curtis Alan Provance
Paragon Computing

One member brought a 'damaged' floppy to the last meeting. Something had happened to the disk and all his files were gone! Actually, he knew that the information was still there - but he had no access to it. Within a few minutes, we had successfully recovered all the files

This is the first in a series of articles on how your disk controller works, and how you can recover from several common disk errors. In order to examine and repair your own disk, you will need a disk utility program which allows you to read and write individual disk sectors. John Birdwell's excellent FAIRWARE offering, "Disk Utility" is what I will be using. You may obtain the complete program along with disk based documentation by sending a minimum donation of \$10 to:

John Birdwell
7052 Springhill Circle
Eden Prairie, MN 55344

Secondly, I will be using a 'training' disk and referring to specific sectors - and bytes within those sectors. To ensure that your 'training' disk looks like mine, you should format (or reformat) a disk and name it "BLANK". Please format it as a Single-Sided, Single-Density disk (SS/SD) - and don't write-protect it!

Finally, if you are not familiar with using hexadecimal notation, please stop and read the article on hexadecimal found elsewhere in this newsletter. The bulk of this discussion will use hexadecimal (Disk Utilities 'native' mode). Hexadecimal is not hard to learn, and the few minutes you spend on the other article will save hours of frustration later when you do your own disk 'doctoring.'

TERMINOLOGY

Let's review some terminology (as it applies specifically to TI99/4A computers):

SECTOR: A continuous section of your disk which holds 256 bytes of information. Each byte can have any one of 256 values. Other computers may have 256 byte sectors, 512 byte sectors, or whatever. There is information stored in between the sectors, but we won't concern ourselves with it during the course of these articles.

TRACK: A continuous collection of sectors. TI99/4A disks typically have 9 sectors (Single-Density) or 18 sectors (Double-Density) in each track (although MYARC's preferred number of sectors for Double Density disks is 16). A TI99/4A floppy usually has 40 tracks per side (some have only 35 - more on that later).

SIDES: How many sides of a disk are used, either a Single-Sided (usually the side without the label) or Double-Sided disk.

DENSITY: How many sectors are packed in each track - typically 9 for Single-Density and 18 (or 16) for Double-Density.

Therefore, if you do your math right, a Single-Sided, Single-Density (SS/SD) disk having 256 bytes per sector, 9 sectors per track, and 40 tracks per side has the capability of holding 360 sectors, or 92160 bytes (usually just called "90K" because a "K" is 1024 bytes). A Double-Sided, Single-Density (DS/SD) disk (or Single-Sided, Double-Density) (SS/DD) holds 180K, and a Double-Sided, Double-Density (DS/DD) disk holds 360K (all figures based on 9 or 18 sectors per track, as appropriate).

DISK USAGE

Computer makers use different formats for their floppy disks. This includes how the tracks and sectors are set up, as well as which sectors are used for control information. 'Soft-sectored' disks can be formatted in a variety of ways - TI's way, IBM's way, or whatever. We will only deal with TI's format during these articles.

TI chose to use the first two disk sectors for their control information. This is why you get the message "358 sectors free" when you format a good SS/SD disk. There are really 360 sectors - but two are needed by the controller.

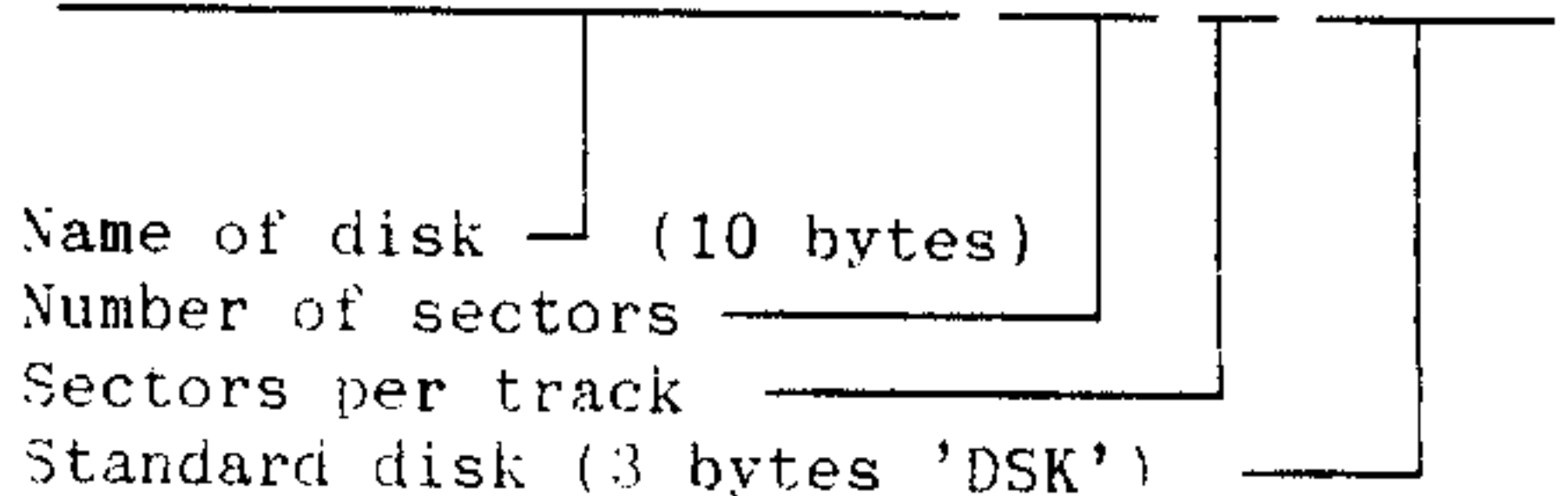
SECTOR 0

The first sector on a disk (all the way out on the rim) is sector 0. Let's see what the first sector looks like. Load the disk utility and select "SECTOR EDIT" from the menu. Place the disk in drive 1, select drive 1, then select sector 0 as the sector you want to edit. The screen should look like this:

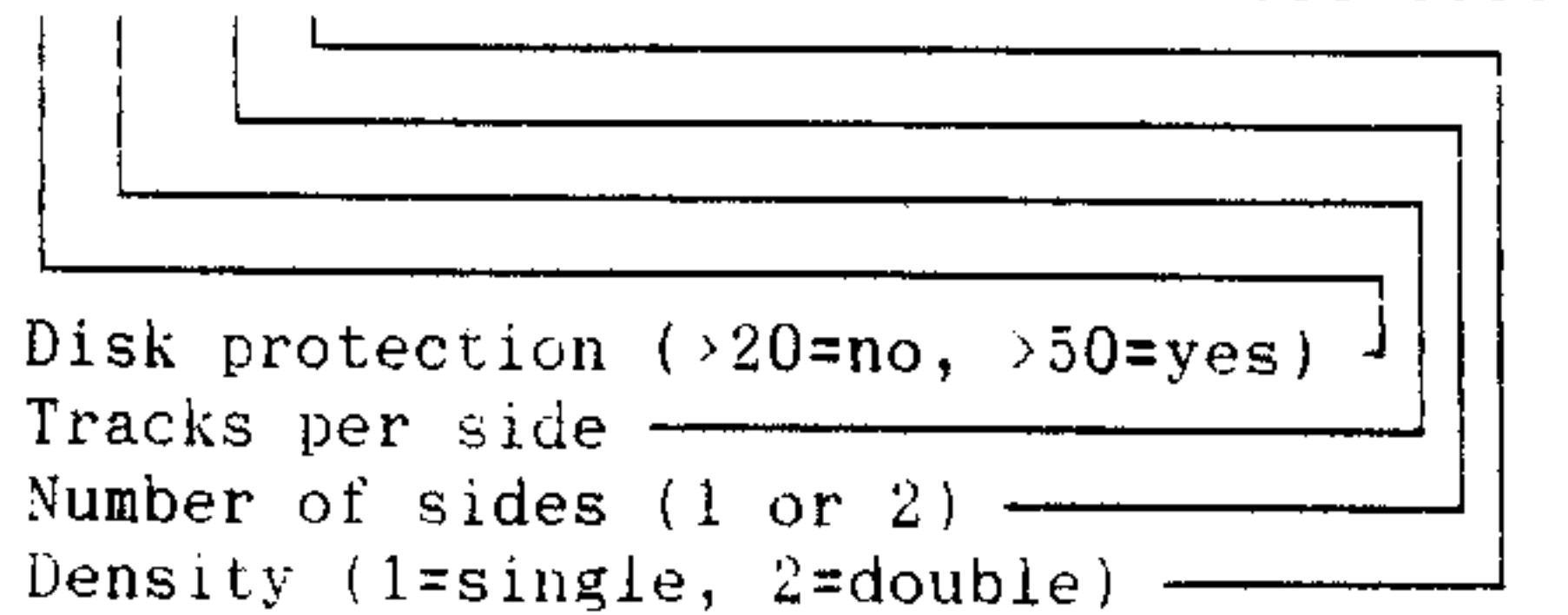
```
424D 414F 4C20 2020 2020 0168 0944 534B
2028 0101 0000 0000 0000 0000 0000 0000
0000 0000 0000 0000 0000 0000 0000 0000
0000 0000 0000 0000 0300 0000 0000 0000
... (the rest are all 0000's or FFFF's)
```

If you want to see the characters in ASCII, press the control and A keys at the same time. The screen should now be:
 B L A N K . h . D S K
 (.)
 ... (the rest all appear as . .)

This sector holds the following data:
 B L A N K . h . D S K
 424D 414F 4C20 2020 2020 0168 0944 534B



```
2028 0101 0000 0000 0000 0000 0000 0000
```



The remaining bytes on this line are reserved for future use.

Please note that the disk protection used here does not refer to the write protection you get by covering the notch on the side of the disk. This is a software protection scheme developed by TI which we will discuss in a moment.

The next row of bytes are also reserved for future use, along with the first eight bytes of the fourth row.

The ninth byte of the fourth row is the first byte of the sector bit-map. A bit-map means that each bit in each byte represents a larger object (in this case, a sector).

Each byte consists of eight bits, and each bit represents a sector. If a sector is currently being used (or if it is damaged and the controller couldn't initialize it) the bit will be set to 1. Otherwise, the bit is 0. Since sectors 0 and 1 are always in use, the first byte will always have the first two bits set.

It is important to note that bit 0 is the right-most bit. In other words, if you were to expand a byte into its individual eight bits, the bits would look like this:
 7 6 5 4 3 2 1 0.

On a fresh disk the bit-map table will start with >0300 >0000 In other words, since >03 = 00000011, this bit map indicates that sectors 0 and 1 are in use. This bit-map can hold data for a DS/DD disk (takes 128 bytes). Since we formatted the disk as SS/SD, the last 96 bytes are FFFF - meaning that they aren't available.

DISK PROTECTION

The Disk Manager module supplied with the TI disk controller contained an undocumented feature which would provide disk protection. This feature was enabled by pressing (I believe) the Control and X keys simultaneously - ten times. Once done, you could create a disk which was "protected" from being duplicated by the disk manager.

The only protection this feature provided was to alter the first byte in the second row from a space character to a 'P' (for protected) character. Until the advent of DM-1000, Disk Utilities, and similar programs, this protection thwarted most of the would-be copiers. It is useless now, except against users of TI's original Disk Manager cartridge.

NEXT MONTH: FILE HEADERS AND SECTOR 1

MUNCH OFFICERS AND NUMBERS (all in 508 area unless noted)

President	W.C. Wyman	839-4134
Vice President	Bruce Willard	852/3250
Secretary	Jim Cox	
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Disk Librarian	Lou Holmes	617 965/3584
Tape Librarian	Walter Nowak	413 436/7675
+++++++	Jack Sughrue	476/7630

FEBRUARY MEETING. The February meeting was one of the besst attended in some time with over 25 members present. Jack did a demo of Page Pro and Lou demoed DOM #3 which he hadn't had a chance to show before. The group decided to make the TIPS disks our fund-raiser for the Fayah.

MARCH MEETING. Jack will demo the latest version of Funnelweb and it will be available as the Disk Of the Month. Since this version taakes two SSSD disks the cost will be \$3.00.

TIPS DISKS READY. The TIPS disks will be available at the March meeting. This is a set of 10 SSSD archived disks which contain almost 3,000 graphic pictures and utilities. The cost is \$10.00 per set, mail orders please add \$2.50 for postage.

RAFFLE. Every month we have a raffle to help defer the cost of the monthly hall rental. The number of prizes awarded depends on thee number of tickets sold. This month we have a number of Norton Software games and TI T-shirts a prizes. ~~If you have some old things you no longer use how about some donations for the raffle.~~

MONTHLY SALES. At each meeting you have the opportunity to buy and/or sell new or used hardware, software, books and original programs. Please have prices marked on any items you have to sell.

LIBRARY NOTICE. Please return any items borrowed from our library. If you can not come to a meeting or give these items to someone who will be at the meting, please mail any library items to the group address.

"FAYAH" DATE. The date for the 1990 BCS fayah has been changed to Saturday May 5, 1990 at the Waltham Central Middle School 55 School St. Waltham, Hours 10-4.

FIRST BASE OFFER. JP Software, Peter Hoddie's new company, is offering First Base at half price to owners of TI-Base. Send a photocopy of your TI-Base manuel along with \$25.00 and \$2.00 postage to JP Software 2790 El Camino Real, #107 Palo Alto, Ca. 94306. This offer will expire in a couple of months.

REPRINTS. Reprints are permitted as long as credit is given to M.U.N.C.H.

ARTICLES. I am always looking for articles for this newsletter, anything which interests you will probably interest other members of the TI community, so please share your ideas and opinions with all of us.

WELCOME NEW MEMBER. John Hilyard of Worcester.

