



MAY 1996



OSHAWA TI  
99/4A  
COMPUTER  
USERS GROUP

OSHTI



# CONFERENCE

LAST CALL for the Multi User Group Conference to be held in beautiful CLEVELAND, OHIO!

The festivities begin on Friday May 24th and go till Saturday night. This is a great opportunity for TI'ers in our area to attend such an event.

One way or another, I will be attending this event. If you're interested just give me a call! When more than one person goes, costs and accomodation can be split.

Cleveland is closer than Lima and has other things to offer. Indians Baseball and the Rock and Roll Hall of Fame.

Tom

## LAST MEETING OSHTI

At the April OSHTI meeting we had a demonstration of how to take your TI computer apart and, of course, how to put it back together.

The meeting was held on Thursday this month since it was more convenient for Bernie. As it turned out Bernie had a meeting Wed. So we welcome Bernie back. Bernie mentioned that he had turned his PBox on its side to form a tower quite a while back. He also added some rubber feet to the side to make it sit up better. Thanks for the tip, I'll try it.

I demonstrated how to take the TI99/4A apart and clean it. See the article later.

No one made it to the PICKERING HAM FLEAMARKET this year. I just plain had no transport and others forgot.

Phil brought a color print-out from a color inkjet printer. It was a picture of a 2nd world-war plane. It was very nicely done, not quite photo perfect, but a very good quality printout none-the-less. Phil just used the

printer, but maybe he has thoughts on purchasing one?

Doug brought us up to speed on his trip to WRESTLEMANIA. It was quite an interesting story. Now, can you just type some of it up and we will have an excellent article for the newsletter?

Doug has ordered a SCSI card and hopes that it comes soon. The ROM chips is supposed to be 'finished' and the SCSI ready for the TI99/4A. I have been using it only on the GENEVE since last August. Hope it works as good on the TI since it works great on the GENEVE.

Dick read a letter from Bruce Harrison. Bruce sent him the latest version of the WORDSEARCH program complete with a second disk of words. Apparently there was a bug in the logic that Bruce just found recently. Thanks go to Bruce once again.

The D.O.M. contained some games that I had not seen before. Some were difficult, like INSANITY and others like AIRTRAFFIC were similar in intent. The CASINO game of BLACKJACK was well done as was the CRAPS game. We managed to win some money at BlackJack.

ROMBUSTERS was a fun shoot the C-64 and ATARI logos out of the sky. T\_VANTZEE proved to work well even though I had forgotten how to play it.

The coffee went down and the doughnuts disappeared and

### MAY INDEX

INSIDE THE 99/4A.....2	BUGGY PROGRAMS(IBM).....5
PIRACY.....3	TIED (UUE ENCRPTION).....6
DISK DRIVE BREADDOWN.....3	MAY KAWARITHA MEETING.....6
MICROpendium ANNOUNCEMENT.4	SUMMER WEATHER FORECAST...7
COMPUTER SHOW.....4	HOW TO HOSE THE GASERS....7
VIRUSES(IBM).....4	E-MAIL WOES.....?

slowly, the meeting came to an end.

SEE YA NEXT MONTH.

TIME TO PLAN for the PICNIC!!!!

Get started on you horseshoe pitching!!!

TENTATIVE DATE is SUNDAY JULY 14th.



## INSIDE THE 99/4A

A couple of tips in doing this were shown. First, the on-off switch on the console can be pulled STRAIGHT OUT to release the mechanism inside. This is the very first step.

All of the screws that you will be taking out or rather loosening require a PHILLIPS screw head...typically US, eh!

It is best to work on the computer with the Keyboard face down. Doing it this way saves you needless time in looking for fallen parts.

There are 7 screws which hold the two plastic pieces of the computer shell together. Loosen all of these and pull the pieces apart.

You will now see that there are 3 parts to the computer.

- > the Keyboard
  
- > the steel encased CPU or computer  
and
- > the power supply

The power supply is held down by two short screws and kept in place by a plastic post. It is attached to the CPU by a clip-on wire harness which carries the 5V, -5V, 12V and ground wires. When you take this out of the computer the on-off switch mechanism may fall out. Not to worry, this just sits in a slot. The same may be said of the little plastic door for the 'fire-hose' or PBox connector.

Essentially the power supply convert the AC transformers current from the 18-22V and 7.5V to the 12V and 5V potentials that are needed to run the computer. The reason why the power supply runs hot or warm is that the voltage drop from 18-22 to 12 and 7.5 to 5 gives off heat. This is why the area under the cartridge slot warms up.

The Keyboard was discussed separately. There are several different types of Keys. Some are easy to remove (the ones that the day-care got were this variety) and some require a small screw-driver to pop off. However, you

can replace a single BAD Key with a good one from another keyboard (bad of course) by DESOLDERING the Key and slipping two narrow pieces of steel on either side of the Key to release it. Although this technique is useful for single keys, it is still easier to get a whole new Keyboard and use it. As was pointed out, you can still get a whole new II99/4A from me at a good price and not have to worry about the Keyboard itself.

At this point, some of the tools needed to work on soldering and desoldering were brought out. My small soldering iron is only 18W. This is excellent for work on the smallest of circuits. A 25W iron can be used for larger wires (20 gauge).

The CPU is on the large board protected and cooled by a large two piece steel can. There are 2 clips that help hold it together and 3 bolts that give it most of its strength. The two long bolts have their long end facing the GROM port. This is important for putting it together later. The GROM port or cartridge connector pulls out and can be cleaned. I use a Canadian product called ULTRA-STRIP. This is an all purpose paint and varnish remover that contains a mixture of methyl alcohol, acetone, toluol and methyl ethyl Ketone. It also has quite a penetrating odour. This solvent can be used on a small rag or Kleenex to clean the metal connectors to the GROM and Disk drive cable. It does an excellent job and will reduce needless lock-ups. I even have used it on my old IBM when all else failed; it worked.

After removing the 3 bolts (nuts and lock washers), the steel can around the MAINboard (formerly called MOTHERboard, but now we have removed any sex bias), you can see the computer chips and resistors that make up our II. The CPU is the 9900 chip and is the largest, so it is easy to spot. It has 64 pins and is about 10 cm long (4"). The next important chips were pointed out. These are the 9918A video chip (has a heat sink and heat sink compound on it) and the 9901 or timing chip. Without any of these important chips the computer would be dead.

The GROM chips were also pointed out. These are were the GPL operating system for our computer lies. Both the 9918A chip and the GROM chips are SOCKETTED. This means new chips could be put in in their place. II might have introduced new video and GROM if they had continued. Of course, Gary Bowser had developed the 9958 chip to replace the 9918A and had redone the GROM as well. This enabled the II99/4A to have 80 column displays. These were the IIM and SOB hardware products. They are no longer available on the market.

The standard II99/4A is a well made computer. You can tell that quality went into the production of this computer. Although there are some over-engineered items, the overall quality can be seen by the way things fit together and come apart.

The Keyboard and the power supply are attached to the

mainboard by easy to remove connectors. In fact, there is no reason why you can't add some flat cable to the keyboard and have a remote one.

It was also noted that there was some space between the one side of the mainboard and the plastic casing. This was made use of by the ZENO board. It fit right into this 2-3 cm gap.

When everything had been taken apart and cleaned, it was time to put things back together. Of course, there are things to watch out for:

> don't forget to put the GROM connector back in or your won't be able to use cartridges.

> don't forget to insert the keyboard or else you will never be able to get the computer to work.

and

> don't forget to reinsert the power connector into the power supply or else nothing will get power to work except the on/off switch.

Of course, no one would forget these...ha,ha

When all of the parts are reassembled the last thing to do is to make sure that the on/off switch aligns with the plastic slider.

Before putting all of the screws in, make sure that the on/off switch insert functions. Tighten the screws at this end first.

There you have it. Complete disassembly and reassembly of the TI. A job that is not difficult and can be very educational.

Tom



## PIRACY



When I was in a computer store buying my 'new' used drives, I spotted several colourful letters posted on the countertop. They dealt with COMPUTER PIRACY, in BIG LETTERS. There were about 5 letters referring to 2 places in Toronto and 3 in Montreal. One place in Toronto was a software RENTAL firm and the other was one that I recognized.

One of the places that had been charged was a store that I had visited two years ago, P.O.S. Computers. They had been charged with illegally installing MSDOS, WINDOWS and several other utilities on hard drives that they sold. The fine was a hefty \$10 000.

Come to think of it, I haven't seen their ads in the papers recently either.

I wonder if they went bankrupt and avoided the fine too.

## DRIVE BREAKDOWN



Just before the last OSHTI meeting, one of my slim-line disk drives started to act up. What it did was to etch a groove in any disk that was inserted into the drive when it was asked to do a directory. Needless to say the disks became toast very quickly.

There are two routes to go:

> buy a 'new' drive

or

> try to fix it.

Being a hardware hacker at heart (alliteration or what!), I pulled the drive out and gave it a preliminary look. The drive heads seem to be very well protected so I dismissed the idea of a fix and paid my \$20(Can) for a used drive.

Since I was buying one drive I thought that I would buy a second one as back up. When I got home, both drives only read HALF of a directory; ie what I assumed was a SINGLE SIDE.

When I took the drives back, I said that they were only single sided and couldn't read the back side of a disk. The owner said that they are double sided and that a directory is read first from one side and then from the other. He intimated that the first sector read was from one side and then the second sector read was from the other side. Now, I don't think this is the case but I said that the drives didn't work and I wanted either replacements or my money back.

To give you an idea how tight money is, he spent over 20 minutes trying to remedy the situation (working in the back room). At the end of this time he said that one of the drives was toast and that he had found another drive that would work to go along with the second faulty drive.

Well, I said that I really only needed 1 drive so I would take the one that he said was working and get my \$20 for the other. And they acceded to this.

When I got home, I plopped the 'new' drive into its place and tested it. It worked fine.

While I was in the computer store for about 1/2 an hour, I happened to note that repairs were done at the rate of \$50 an hour. So after all was said and done, I figure that I was ahead by \$5 on a used disk drive. It just goes to show what the economy is like these days.

# MICROPENDIUM

## BIMONTHLY

MICROpendium is going Bimonthly starting with their May 1996 issue.

In early April I received a postcard from them and I quote:

"The next issue will be published in May, followed by issues in July, September, November and January. This decision does not come easily, but it's been done in the interest of the IT community. Because of dwindling revenues, we had to choose whether to continue as a monthly for several months or convert to a bimonthly and publish indefinitely.

Most of the readers responded to our informal poll mentioned that a larger, bimonthly publication was preferable to other options. We expect each bimonthly edition to contain 42-48 pages. Unfortunately, we can't reduce the subscription price. To do so would eliminate any advantage to becoming bimonthly.

MICROpendium Disk subscription will be reduced to \$25 per year. Those who have already renewed at the existing rate will have their subscriptions extended. Overseas subscribers to MICROpendium disks will see similar extensions.

As always, your continued support is appreciated and is the one thing that keeps us going.

Thanks - John Koloen and Laura Burns"

Although this is sad news, I think that it was wiser to go bimonthly than quarterly and reducing the costs. I always look forward to receiving my subscription to MICROpendium with its wealth of info on the IT 99/4A and Geneve.

## COMPUTER SHOW

The GREAT CANADIAN COMPUTER SHOW that was sponsored by WE COMPUTE was held at the Pickering Conference Centre East from May 3rd to 5th. Admission was \$5 with coupon and \$6 without. At 10 am there was a modest lineup at the front doors. We were all in by 10:20.

The show offered the usual variety of computer retailers and entrepreneurs along with a series of lectures, on the INTERNET of course.

Prices were reasonable and there were no large companies represented by glitz. I don't think I could remember any of the vendors since they were not big names.

After the first walk-through, I tried to spot items that I was interested in and then compare prices. IBM keyboards were offered at prices from \$15.95 to over \$100 for the new ERGONOMIC boards with split and elevated keys. Three and 1/2 inch DSHD diskettes were going for \$16.95 + tax for 50; but few seemed interested.

Usually, I look for a flurry of activity at a vendors table and then proceed to check it out. There were a few of these and they always turn out to be tables offering hardware items like mainboards and drives.

There were lots of BOOKS, thick and shiny for sale at 50% off. Who would pay \$38.95 for a book on how to learn DOS anyway? They were even offering free posters with book purchases.

One area that I thought was of note was the PUBLIC DOMAIN diskette and CD table. There was a variety of topics at very reasonable prices; \$2.95 DSHD and \$3.95 DSHD and \$9.95 for CD software. I'll tell you how good this stuff is later. I bought 2 disks on Chemistry with the Windows format. I hope they are better than the ones I reported on before.

By 11 am I was finished. Obviously, you can see that it was NOT a big show. Probably about the same size as the Ontario Computer Fair was in Whitby, but with no user group representation.

Tom



## VIRUSES

What I hate about the IBM world is the concept of the VIRUS; and now, that I have experienced it, it is NOT FUN!

As it happens, I work in a place where the IBM rules, and I have to use them once in a while, usually just to keep student records. Well, one day I happened to use the English departments computer to update some student marks.

Earlier this week (Apr. 10), I was told by the sysop at our school that the English computer had 73 viruses on it. Apparently, they had reformatted their hard drive and did NOT put the auto virus checker program on it. This computer is also used by a wide variety of people, some of whom regularly bring their disks of downloads from Internet to this computer.

So, I checked my data disks and the virus checker found one virus on each of my disks. Since I had used these disks on my old IBM at home, I knew that this would also be infected. This is a very time consuming procedure on an old IBM and not that fast on a newer IBM, and quite frankly a pain in the neck.

Now I have learned that there is a new, even more destructive virus out there in IBM land.

Well, it makes you glad that we don't have to worry about picking up a virus on the TI 99/4A. Although it is not impossible it is highly unlikely.

Tom

## BUGGY PROGRAMS



Some people are concerned that there are few programs being written for the TI 99/4A. Although I have answered this in the past few months, let us take a look at what's being written for another computer.

One thing that's frustrating is the fact that there are a lot of BUGS in some commercial software.

In November 1995, I attended a Science teachers' conference in Toronto, there I purchased 2 different pieces of software. One was a marks manager and the other a Science report writer. Both were in the WINDOWS 3.1 format. Both have caused a lot of grief. Neither work as expected or as demonstrated.

Although the WINDOWS environment is supposed to be user-friendly, if you know WINDOWS, it can be a nightmare when combined with buggy programming.

Both of the pieces of software turned out to have errors. In the case of the marks manager program, it wouldn't even install on the hard drive. After 2 phone calls, I was given the correct line to add to the autoexec file. They also sent me an updated version within a week. The updated version installed OK but it was so slow on a 486SX (beefed up 386) that it was easier to write names out on a piece of paper and photocopy them. I still have not been able to get it to work to my liking.

The second program was called f(g) Scholar. After about three hours of frustration with it, I now know what the 'f' stands for. Not only did it NOT want to plot a graph from the data that I gave it, but when asked to plot the BEST FIT curve with the original data, it botched up completely.

Then, for some reason, the 'fast buttons' got trapped in the middle of my window and wouldn't go away.

We got so frustrated with this that my son removed it from his hard drive.

The DOS version of the same program works much easier and FASTER by a long shot, that it is a wonder why anyone would use the WINDOWS version (3.1 ie.).

Now I know why they show you all of these programs on a Pentium with 100 Hz processors.

And these programs take up a lot of space. f(g) Scholar for example requires 7 Meg to load and needs 5 Meg afterward.

Print-outs from the f(g) Scholar program took 15 minutes and only printed 1/2 of my graph. Hum... makes you wonder.

I know you get better graphics with these other computers, but I don't think that you get better quality.

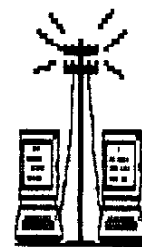
When it comes down to it, the productivity programs that TI have for spreadsheets, databases, and drawing are much easier to use and have no bugs like the ones that I use. I still do 99% of my wordprocessing on a TI. And the time that I save in using a TI is huge when you take into account that there are more people at work than there are computers. I never have to fight anyone off using my TI 99/4A at work.

Many years ago, I wrote a graphing program for the Commodore Pet computer. It had hardly any screen resolution, BUT it WORKED. The same can be said of a marks program that I wrote. And the PET only had 32K of space to work with, the same as the TI.

Is this progress ?

Tom

## UUE ENCRPTION



A while back we had been asked about how program files have to be sent over the phone and I mentioned that there are special ENCODING and DECODING programs which convert these UUE files to program files. Well, I found the program for the TI which does this. It is called TIED by Clint Pulley. I am reproducing the documentation below so that we can get a better understanding for what is involved. As you can see by the date, it has been around for some time.

TIED v1.2 Release notes 91/10/14

Program and documentation contributed to the public domain

by Clint Pulley

Many electronic mail facilities such as the Internet, Usenet and UUCP are not able to transmit non-text file formats so programs such as the Unix utilities uuencode and uudecode have been written to make binary file transfers possible. As more TI and Geneve owners gain access to electronic mail, the need for similar programs which run on our systems has become apparent.

TIED is a c99 program for the TI-99/4A computer which may be used to encode any DF128 or IF128 file (archives, for example) into a DV88 ASCII representation which may be transmitted by electronic mail and decoded back to the original form at the destination. The encoded file format is identical to that used by the Geneve version of this program (GED).

The program is loaded from the Editor/Assembler Option 5 selection or from Extended Basic (memory expansion required) with the XB-C99-LDR program included in this archive. Once in execution, the program prompts for the names of the input and output files, determines the type of processing required by opening the input file, encodes or decodes the files and reports the number of 128 byte blocks processed. TIED writes a special header which it recognizes on decoding so it is not necessary to edit the encoded file before decoding as any text preceding the header is ignored.

Data is encoded/decoded using a six bit algorithm - each ASCII character contains six bits of input data biased by 33(10) to ensure that the resulting character is printable. Each group of three text lines, corresponding to 128 bytes of input data, is terminated with a checksum byte. If TENC determines that the recorded checksum byte does not equal the computed checksum, an error message is displayed and execution is terminated.

This program is contributed to the public domain in the hope that it will facilitate increased communication and software exchange between TI-99/4A and Geneve owners. All I ask is that you acknowledge use of the program by trying to send email to me at the address listed below.

Clint Pulley  
Internet: U001@cs.cciw.ca

Version 1.1 : When encoded files are distributed via Usenet it has become apparent that some systems, on encountering a line of text that begins with a . (period), delete that character! This results in a checksum error exit when decoding. TIED v1.1 checks for encoded lines that are short by one character and prefaces such lines with a period before decoding.

Version 1.2 : Apparently, some systems add a . (period) to lines of text that begin with a . . TIED v1.2 checks for encoded lines that are one character longer than expected and deletes the first character of the line before decoding.

# KAWARTHA MEETING

LIFT  
99  
KAWI

The May meeting of the KAWARTHA 99ers was a modest affair at Glen's. Most of the evening was spent chatting about a variety of things and it was a relaxed atmosphere as everyone seemed ready to get out there and welcome Spring.

I demonstrated DISPLAY MASTER and a lot of people were wondering how something so similar to WINDOWS could have been written way back in 1986, for the TI. I still don't know why it did not have more of an impact on the TI world. I will be doing a Science lesson one of these days using this program. It fits very well into the DEMONSTRATION format that goes with teaching a lesson or giving a demonstration for a show.

We also had a look at GRAPHX. GRAPHX was a contender for the graphics title along with TI-ARTIST.

The main strength of GRAPHX comes from the ease of use and the use of pull-down menus. The only complaint about the menus is the color bar is difficult to see unless you are close to the screen.

I also could not find a simple way to clear a large area of the screen.

On the plus side was the fact that the GRAPHX program is all resident. You load it once. TI-ARTIST is loaded in modules and is very disk drive intensive unless you put it on a ram disk.

While TI-ARTIST has INSTANCES, GRAPHX has a CLIPART. The clipboard is a little different than what you might expect. While you can save several clip-art pictures on the clip-board and load them from disk, you only see ONE picture (or LETTER of the alphabet) at a time. To get to the next one, you use the joystick.

I still prefer TI-ARTIST over GRAPHX, and TI-ARTIST PLUS on a ram disk (or SCSI) is much superior to GRAPHX especially when it comes to FONTS.

The Kawartha group voted NOT to have a JUNE meeting, so they will reconvene in September.

As usual, I invited them to our July OSHTI picnic. I hope some make it this year.

The drive home was not as pleasant as the drive up because of some rain showers. But it is a very FAST drive home and only 4 STOP SIGNS and NO STOPLIGHTS between Glen's place and my house; 53.9 Km in total.

Tom

# WEATHER FORECAST ?



I guess it's time to take another stab at predicting the weather for this summer.

I think we will see a cool summer this year with pleasant but not the high temperatures that we saw last year.

Spring has already been very slow in coming to this part of the country. We haven't even (May 12) had a day when the temperature has hit 20 C (70 F). This is unusual to say the least. Mother's day is the traditional Sunday for seeing blossoms on apple and cherry trees. I see hardly a leaf so far let alone any blossoms. In fact, they are calling for a low of -1 C tomorrow night...

Of course, if we were in Calgary, we would still be shovelling snow !

Yes, there will be a summer this year, but it will be cool.

By comparison, I have been charting the temperature in Budapest in May. They have had temperatures of almost 25 C everyday since the start of May. Now, that's more like it.

P.S. Two geese have tried to set up shop in my pond again, but I've tried to scare them off. However, I have been too successful and I got a call from my neighbour and he is mad at the geese since they decided to land on his shed and leave their deposits of green goo there. He asked my permission to 'blow them away' and even offered me the meat. I said that was fine by me but I don't care to eat them. It's hard to believe that the Canada Goose was once an endangered species. Now we have too many of the suckers.

# HOSE THE GASERS



How do you fight the big oil companies when you see the gas price hit 60 cents a litre for no apparent reason ?

I have thought about this before and planned to buy \$1 worth of gas and put it on my credit card. Someone else also came up with this idea and advertized it in the Toronto Star, not too long ago.

Well, when the price of gas (regular) hit 60 cents last week, I decided to do it. I stopped at 6 gas stations on the way home and bought \$1 worth of gas in each and paid

for each on my credit card.

I decided to only buy from the BIG OIL companies- ESSO, SUNOCO and PETROCAN so as not to upset the smaller retailers who buy their gas from the BIG companies.

The reaction from attendants was pleasant, no one said anything unpleasant, but they were surprized to say the least.

When I stopped at the same station the next day and did the same thing, I could tell that my point was getting across. Although the attendants are still pleasant to the customer, you might pick up an odd word of disgruntlement as they turn to go to there kiosk.

The companies make less on the \$1 purchase since they have to pay the credit card company out of the \$1. Percentage-wise they are making less on this sale than on any others. However, I do NOT pay any more on my card for using it for small purchases than for large ones. Only the gas companies will feel this not the local retailer.

The down-side of this concept is the fact that you have to use up more of your time to do this. However, if more people do this, then there will be a definite message that the oil companies will soon get.

Even if we all did this only once a month or so, then the message will get through. Try it!

Tom

# E-MAIL WOES



In the last few weeks something has happened to my E-mail carrier. For some reason it will NO ACCEPT my pass word.

The problem seemed to start when I didn't back-up my files from one of my ram disks. Since this particular ram disk had not given me any problems for quite a while, the old back-up files were quite old. This meant that although I had all of the files, they were NOT updated when I had entered my carrier passwords in the MACRO files.

As a result, I thought that I knew my password pretty well, but I guess that I didn't know it well enough.

Maybe, writing PASS WORDS down somewhere will help. Just a tip for all of us who might rely on MACROS too much.

Tom

