

# TPUG Newsletter

Views and News of Toronto Pet Users Group, Inc.

c/o John Easton, 258 Lake Promenade, Etobicoke, Ontario, M8W 1B3 phone (416) 251-1511

Fall—Winter 2005

*From the President -*

## World Of Commodore Toronto Expo

To be hosted by the Toronto PET Users Group, now in its 26th year.

December 3, 2005.

Hours are 10am till 10pm.

At Alderwood United Church,  
44 Delma Dr (Browns Line/Evans Ave),  
Toronto, Ontario, Canada.

For accommodations, check  
Motel 27 (650 Evans Ave)  
(416) 255-5500 - info@motel27.com

There will be vendors selling new and old products, Demos of innovative ideas and guest speakers revealing facts about days gone by from Commodore and TPUG.

Admission is \$15 per family.  
Tables are \$15 for the first one and \$10 for each additional table.

Guestrooms are \$79/night and will accommodate 4 people.  
(Ask for group name: TPUG)

All funds are in Canadian dollars.

TPUG will set up a freebie table and there will also be door prizes and a raffle.

On Friday TPUG will have a hospitality room where overnight guests can gather and say hello to old friends. Saturday will be the main event. Sunday morning the overnight guests are invited to a round table to discuss the weekend.

For more information visit our web site, [www.tpug.ca/woc](http://www.tpug.ca/woc). Please pre-register early so TPUG can get a better idea as to how many are coming and their needs.

## Member Information

### Voice Info

We have discontinued our TPUG phone listing - contact members as listed here at home phones.

Website: [www.tpug.ca](http://www.tpug.ca)  
e-mail: [info@tpug.ca](mailto:info@tpug.ca)

### Membership Rates

|               |         |
|---------------|---------|
| Canada        | \$25    |
| USA           | US \$25 |
| International | US \$25 |

### Board of Directors

|                 |               |
|-----------------|---------------|
| President       | Tom Luff      |
| Vice President  | John Easton   |
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| Membership Sec. | Ian McIntosh  |
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| Head Librarian    | Ian McIntosh    |
| Amiga             | John Buller     |
| C128              | Tom Luff        |
| CP/M              | Ernie Chorny    |
| GEOS              | Joe Palumbo     |
| C64               | Joe Palumbo     |
| C64 Education     | Bill Cumberland |
| Comal             | Ernie Chorny    |
| Plus/4            | Ernie Chorny    |
| Vic 20            | Ernie Chorny    |
| PET/CBM/SuperPET  | John Easton     |
| PET&C64 Education | John Easton     |

### Support

|                |  |
|----------------|--|
| Mail           | Tom Luff   |
| Telephone      | John Easton  |
| Disk Orders    | Librarians   |
| Member Records | Ian McIntosh   |
| Meetings       | Tom Luff<br>and Ernie Chorny   |
| Shows          | Tom Luff & Ernie Chorny  |
| Webmaster      | Golan Klinger  |
| Newsletter     |  |
| Editor         | John Easton (416) 251-1511<br><a href="mailto:jeaston@rogers.com">jeaston@rogers.com</a> |

## Meeting Schedule

**Westside and Amiga West:** Third Thursday of the month (except summer) at Alderwood United Church, 44 Delma Drive. Delma Drive is just west of and parallel to Browns Line, south of the Queen Elizabeth Highway, north of Horner Avenue. From the west, exit QEW at Evans Avenue, east on Evans to 2nd stoplight, south on Gair to Delma Drive. From the north or east, follow signs from QEW or Hwy. 427 to Browns Line, exit right to Evans Avenue, turn south on Gair (first stoplight) to Delma.

Contact - Tim Luff (905) 812-5231 e-mail: [tomluff@rogers.com](mailto:tomluff@rogers.com)  
or Ernie Chorny(905) 279-2730 [chorny@tamcotec.com](mailto:chorny@tamcotec.com)

## From your Editor ...

OK Folks ...

It's Newsletter time again. Of course, it was Newsletter time long ago, but then, what with this new-fangled electronic communication stuff, the need (or reality) of the written word (like, on paper) seems to have dropped in urgency. There are now countless newsgroups and websites wherein one might gather all the latest gossip and rumours about our favourite out-of-date (chuckle - out-of-date?) machinery. I chuckle, because continuing development on these 8-bit machines are nothing less than spectacular. And that is just one reason to attend the next World of Commodore Expo next month. Should I mention that Jim Butterfield has agreed to be Master of Ceremonies? And, should I mention that pre-registration via the website is a good idea?

By way of explanation on this constant information update, let me at least point you to the local Commodore info site, **TorontoCBM**, an email discussion group for users of the good old Commodore computers (Commodore 64, VIC-20, etc) in the Toronto area.

1. In your Web browser, go to: <http://www.freelists.org/list/torontocbm>
2. Type your email in the box provided.
3. Select "Subscribe" where it says "Choose an action".
4. Press the Go button.
5. In a few minutes, you will receive an automatic confirmation email. Simply press Reply in your email program and then Send to confirm your subscription.
6. Email messages from the list will appear with [torontocbm] in the subject.
7. To send an email to everyone on the list, send it to [tortocbm@freelists.org](mailto:tortocbm@freelists.org)

From the web link above you can also read archives of all the past discussions on the list. So, there you have it, an instant substitute for this venerable (well, would you believe, Grey-Haired?) Newsletter.

*John—y'r humble Editor*

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*Articles, letters, tips, questions, art, etc. are welcome. Send hardcopy or disks "Attn: TPUG Newsletter", or use Internet e-mail. Advertisements are also welcome. Member's small ads are free. Commercial ads are \$100 per page with a \$10 minimum.*

### Notice to new owners of SuperPet and CBM 8296 machines

TPUG has copies of the Waterloo LANGUAGE DISKS (3 in 4040 format) as supplied with the SuperPet on original purchase.

TPUG has the EXECUDESK disk (8050 format) as supplied with the CBM 8296 on original purchase.

These disks are an integral part of the operating systems of the above machines and since Commodore insisted on referring owners of these machines to TPUG for service, we have added these somewhat proprietary (and also virtually unobtainable) disks to our library - all part of the TPUG mandate of service to our members.

We also will attempt to search out copies of original program disks to replace corrupted disks. In this category you will find such programs as VISICALC, WordPro, and PaperClip.

### INSTANT 1581 DRIVE KIT (just add a standard PC floppy drive)

**\$49.95**

Includes upper and lower shell with logic board & faceplate. A serial cord and power supply box.

- Power Supply Only (1581/41-II) \$24.95
- Upper Case only \$ 9.95
- Lower Case only \$ 9.95
- 1581 Logic Board only \$14.95
- Serial Cable only \$ 8.95

**OPTIONAL:**

- 1581 JIFFYDOS ROM, add \$32.95
- 10% shipping (15% USA)

Taxes are extra for Ontario and Canada residents (PST/GST)

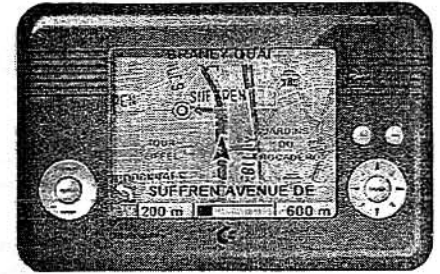
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 JP PBM Products by Mail  
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 Downsview, ON, M3L 1B0

Note: Dealers and User Groups Welcome

## Commodore returns with GPS videopod

Mon, 19 Sep 2005

Commodore, the company that helped kick-start the personal computer revolution in the 80s, is back with a cutting-edge portable media centre that incorporates satellite navigation.



Codenamed, with refreshing simplicity, "The Navigator Combo", Commodore's new handheld device incorporates a

30GB hard drive (preloaded with maps), a large 3.6in touch-screen display and an integrated GPS receiver. And when it's not telling you where to go, it's entertaining you - thanks to built-in speakers and support for music in MP3 and WMA format (including tracks from rental services like Napster and Virgin Digital, or those downloaded from the new Commodore Music Store).

The Windows CE-based device also plays video in MPEG-4 and DivX formats, which can be downloaded from the internet and transferred from your PC via USB 2.0, or stored on SD memory cards.

It's all cutting-edge stuff, although its good to see the new American owners of the Commodore brand (Yeahronimo Media Ventures) have plumped for chunky retro styling. After all, Commodore was one of the biggest names in tech in the 80s and if you weren't manically mining on a Sinclair Spectrum, you were attacking mutant camels on the Commodore 64. But the powerful Amiga computer that followed wasn't good enough to save the company, which soon joined Apricot, Acorn, Dragon, MSX and Sinclair in the great eBay in the sky.

Well, now Commodore is back and not resting on its laurels (unlike the previous incarnation of the brand that simply sold repackaged PCs and TV joysticks with C64 games built in). You can be the first to get hands on with the Combo and more exciting devices from the company at our Best of Stuff exhibition in London, Nov 4-6. See you there.

By Tom Dunmore - Stuff Magazine UK

### J.P. PBM Products by Mail is the NEW Manufacturer of Super Snapshot Cartridge V5.22 - NOW SHIPPING

\*CURRENT Commodore Club MEMBERS SAVE \$5 MORE off the regular price before freight and taxes.

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| SSv5.22 Cartridge       | \$74.95   |
| *C= Club members (-\$5) | \$ _____  |
| 32K RAM add \$19        | +\$ _____ |
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All Prices Are Cdn. Funds  
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 Send \$2 for a catalogue  
 on disk (1541 format) (CDN FUNDS)

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|-------------------------|-----------|
| Subtotal                | \$ _____  |
| Ontario Res. add 8% PST | +\$ _____ |
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| TOTAL                   | \$ _____  |

# World of Commodore—2004

## *World of Commodore 2004 Celebrates TPUG's 25th Anniversary*

The Toronto Pet User Group [TPUG] first started back in 1979. Lyman Duggan was its first organizer, and the man carrying the membership card No. #2 (the DEUCE) was/is none other than Jim Butterfield. Back in it's early heyday, the club sold programs on cassettes, not disks. (Now that IS old!)

The whole "User Group" phenomenon began with the sale of the KIM I, the first standard personal computing machine. KIM I contained a staggering 1 kilobyte of memory. For the first time, you could create and then trade programs. With the advent of the PET computer, Commodore enthusiasts around Toronto decided to start a club dedicated to PET owners. It is funny to hear Jim speak of their early attempts to cajole him into a position of leadership. His standard response was something like, "I will be glad to provide support, but I'm not dumb enough to be President."

With Jim Butterfield firmly entrenched in a support-only role, the club became a HUGE success. In May of 1985, TPUG had 12,697 members. A year or so later, membership had mushroomed to 17,000!

However, the strife of inner-club politics would challenge TPUG severely. For instance, one year when the club had several family members together on the director's board, TPUG received an income of \$440,000. That's good, right? Apparently it was not good enough! The expenses that year were listed as \$444,000!!! Needless to say, such events dismayed the membership!

Between the fall of CBM and problems from within, TPUG fell on hard times. But we who witnessed the World of Commodore Expo in Toronto, saw proof of a stalwart and dedicated remnant, now numbering around 30 members. They put on a tremendous show enjoyed by 86 attendees. The huge majority of these folks came

from Canada and many were former TPUG members. Needless to say, **Tom Luff** (TPUG's current President) and his crew pulled off an amazing Expo to mark the celebration of their 25th Anniversary as a Commodore organization.



Understandably, the Expo began with a look back, as past luminaries of the Commodore World regaled the assembly with stories of past exploits. We heard from **Mike Bonycastle**, TPUG's first real president, **Jim Butterfield**, their "second member", **Steve Punter**, creator of Word Pro for the 64 and the widely favored *PUNTER* protocol for BBS's, **Ron Anderson**, retired CBM employee who sold Commodore goods for years afterward and **Karl Hildon**, the highly regarded publisher of *THE TRANSACTOR* magazine from 1978 to 1988. To hungry Commodore fans, this was like getting the dessert before the meal!

**Leif Bloomquist** gave the first demo. He showed off his remote-controlled truck which the LUCKI team saw in Chicago (page 17, Sept/Oct 2004 DIGEST). What I liked was that now he had improved the program so he could steer the truck right and left, as well as make it go back and forth. It is nice to see progress between Expos. :-)

**Jim Brain** and **Robin Harbron** also had short presentations before lunch. Robin discussed with a mostly Canadian audience the advantages

of Steve Judd's SuperCPU *SLANG* language program (page 13, Sept/Oct 2004 DIGEST).

After lunch **Jeri Ellsworth** discussed publically, perhaps for the first time, the story of the C64DTV and how it came to be. In kindness, she had already given yours truly a preview of this in our cover story, "Road to Hong Kong" (Sept/Oct 2004 DIGEST). This was a very popular subject, of course, and Jeri accompanied her story with pictures from a multi-media projector which made it all the more interesting.

Among the startling new tidbits she tossed out were these.

In mid-August, the C64DTV was incompatible with 90% of the games. After her trip to Thunder Bay and working with Robin Harbron for a week, 95% of the games were working. Poor Robin had to work his regular job during the day and then work deep into the night beta-testing changes in Jeri's chip design. The software deadline for the C64DTV coincided with the Chicago Expo, but she couldn't talk about it then. It was still a SECRET! Still, Mammoth Toys found that several of the games could not be used (failure to get licenses?) and the next week found Robin, Adrian Gonzalez, Mark Seelye, and Per Olafsson scrambling to replace and test programs until the required 30 were approved. Can you spell "HEARTBURN!"?

Then **Jim Brain** introduced his Virtual IEC Peripheral (VIP) to the Canadians. Repeating my earlier theme, I love to see how things improve from Expo to Expo. So I was pleased to pick up on some new ideas, such as the increase in the maximum number of partitions per IEC (serial) device...from 254 to 999. In theory, a club could create an active partition for every disk in the club library.

Look at it this way, in theory at least, Jim Brain's VIP maps devices 1 - 31 from the Commodore and can connect to as many as 999 partitions on each of them. You could immediately access a library covering 20,000 disks or more! Pretend that every disk in your library was a .d64 file on a hard drive. Every .d64 file could be accessed as a separate partition.

Of course, I asked him what happens when you turn the Commodore off. It would be impossible to reconnect to a library of 1000's of disk before every meeting. Jim answered that his program saves the entire configuration in a text file. When you reboot, the file is read and it will re-establish the same configuration you had when you shut down!

**Leif Bloomquist** returned to show us his personal adaption of a program created by a German, Spiro Trikaliotis, named CBM4WIN. Leif added a new wrinkle providing the program with a GUI interface. Now GUI4CBM4WIN works with an XM1541 cable to connect a PC to real Commodore drives (1541, 1571, or 1581) under Windows 2000 or Windows XP.

I found myself unclear as to the purpose of this program, so Leif took a moment to explain it to me. "This is a really exciting development, because up until now, you had to either have a dedicated DOS computer or reboot your PC into DOS mode to work with Commodore drives. This program really makes it easy, for example, to download a Commodore program from the Internet with your PC and then transfer it to a real Commodore disk, or vice-versa." He continued, "My contribution to the project was to create a graphical user interface (GUI) for the program to make it easier to use with a point and click interface. I called it *gui4cbm4win*, and it was written with Visual BASIC 6.0. Anyone wanting to get the program from the Internet can find it at...

<http://www.jammingsignal.com/c64/gui4cbm4win.zip>"

**Jeff Ledger** followed with his demo

which might best be categorized as DTV Hacking. He had opened up his C64DTV, removed the chip set inside, and fitted it into an ITX case. He soldered connections to a PS/2 keyboard, an IEC drive, and a joystick port. He had written a program to open up the "palette mode" which can access all 256 colors which this Commodore chip can offer.

Jeff's program had a program line `..POKE 53311,1` ...which turns on the "magic bit" and allows us to access these extra features. To find out more about the video options "hidden" in the C64DTV, I spoke to Robin Harbron. Though unwilling as yet to disclose all its secret commands, he did explain most of the special video functions that hackers can play with.

- 1). Ability to produce 256 colors from the DTV 64 chip.
- 2). Colors 16-255 are fixed, but colors 0-15 are programmable. This could be helpful if you wanted to fade the entire screen to black without erasing any screen objects.
- 3). Linear Video Mode...screen is a series of horizontal lines instead of being constructed of "cards."
- 4). Offset Register...placing a value in a special register will enable the whole screen to quickly shift right or left.
- 5). Direct Access Memory...works sort of like an REU, thus the DTV can function similarly to a 64 with an REU. (However, this feature is probably most "iffy" and rather untested at the moment. KDS Note)

Thereafter, **Derek Dresser** reported on the Turbo Master CPU and GEOS, **Jeri Ellsworth** caught us up on the Commodore One, and **Greg Nacu** introduced a new drawing program that he is creating for the WiNGs OS which he discusses in a separate article.

This then completed the list of scheduled demos. There were also several unscheduled demos which were note-

worthy. The most popular might have been **Jim Butterfield's** version of *You do the Math!* He tickled our funny bones as he messed with our minds while illustrating certain quirks that occur when one tries to do decimal math on a binary platform like the Commodore.

Below are three of the examples he typed into the 64. Try them for yourself and see if you don't become perplexed.

**PRINT 8.3**

**PRINT 7.81 - 7.66**

**PRINT 112233445566 -  
112233445500**

Another unscheduled gem was **Rob Adler's** demonstration of programs he found for free on the internet which enabled the Commodore to control MIDI devices. This is not my forté, so I don't have much info here, but maybe we can revisit this in a future issue of *the Infinite Loop*.

**Jim Mazarek** cleverly devised a way to get a cheap ethernet connector for his 64. He said that several Palm III Cradle devices were being sold on Ebay for around \$6.00. So he bought one, pulled the ethernet card out of it, and connected it to his 64. His testing indicated that it will not communicate faster than 19,200 baud, which is a bit slow. Still we marveled at his accomplishment. He said he would put the info on the internet. (We will let you know when we hear more.)

Last, but not least, in the unofficial category, **Roger Lawhorn** was asked to discuss his *LnxSvr64*. He obliged the small group around him, one of which was **Jeff Ledger**. Jeff, who loves to put Commodore BBS's on the internet, declared that he could add his code to Roger's. Suddenly, Roger saw the possibility of high-speed internet access for his *LnxSrv64*, and he was blown away by the possibilities. Now if they can just find time to "get together" to complete the project.

... Continued next page

Later that evening, he shared some private feeling about his progress. "I recently hit a roadblock in the development phase. Mainly, it occurred to me that a SuperCPU would be required. I'm not sure I want to make that a requirement. It's a hard decision. SuperCPUs are not easy to obtain right now. I may finish up the platformer code for now and save the massive shoot-em up engine for later. Screen-sized bosses (the big baddies) are already possible and can be imported from Koala Paint files and animated. Currently, the utilities are written in BASIC. Music is played with SID music files. Bottom line, the number of SuperCPUs out there will greatly affect the production (and usefulness) of any advanced features."

A few special categories to close the article...

**Sad but True...**the strength of Commodore clubs was further brought into question by the fact that only three user groups were represented at this Expo ... SWRAP, LUCKI, and TPUG (the host). Notice that all of them sponsored a Commodore Expo during 2004. What does this mean? :-)

**Surprising but True...**TPUG contacted Tulip for permission to use the Commodore name in their advertising, and Tulip answered back, "{That's fine, you were using it before we were!" Then TPUG asked for two C64DTV joysticks to give away as door prizes, and they received 50 instead!

**Best Expo Ever?** In a sense, every Expo is the best ever because it is able to build on those past. But it seemed to our guys that many of these sellers didn't go to Expos often. Thus, the sale tables we found at this World of Commodore Expo were primed with great bargains seldom seen elsewhere.

**Next Expo?** Obviously, we look forward to the next Expo which will be ours!!! Yes, the next LUCKI Expo will be on Friday, the Thirteenth, in May of 2005. It will be a "24 Hour" event so come early and stay late! TPUG's 25th Anniversary Expo was a great success...and a reminder that we have some big shoes to fill! :-))

K. Dale Sidebottom

## Crazy Canadians Commute And Checkout Chicago Commodore Convention September 17, 2005

No matter what your interest in the good old Commodore 8-bits, whether it be part of the demo-scene, a gamer, a hardware hacker, GEOS user, programmer, the SWRAP Commodore Expo in Chicago is definitely the place to be! It's always a blast and there are plenty of surprises.

### Friday

As usual, I hitched a ride with Joe Palumbo. Ten minutes before we left Toronto, we got our first surprise of the weekend:Commodore guru Jim Butterfield had decided at the last minute to come with us!

We had an uneventful drive down to Chicago. Crossing the border from Canada into the USA is usually interesting - but this time, the girl at the customs booth knew right away what the C64 was, she even admitted to having one stored in a closet. With help from the SWRAP event poster, she waved us through. We arrived at the Expo hotel in plenty of time to hang out with everyone and go out for dinner and drinks.

### Saturday

The recommended setup time of 8 AM on Saturday morning was overly ambitious, but everything was set up and



ready to roll by about 10 AM. Style and the gang from #c-64 on the IRC network commandeered one corner of the room. Jim Brain and the group demonstrating QuantumLink RELOADED (more on this later) took over the other side of the room. Mike Hogan's two tables near the entrance were overflowing with gently used C64s, 1541s, and printers, all for sale at very reasonable prices.

The Cincinatti Commodore Computer Club had their usual impressive sales tables set up in the middle of the room, and Joe Palumbo Products By Mail and a few other demos filled up the remaining space. I grabbed a corner table to set up my 64C and VIC20.

SWRAP Organizer Dave Ross officially kicked off the Expo at 10 AM. There seemed to be fewer demos than in previous years, but that was fine as it left more time in between demos to chat, work on projects, and shop.

I did two mini-demos of my current projects: A graphical CD player for the IDE64, and a disk utility cartridge for the VIC20. Burt Bochenek did a detailed demo of the AmigaOne system and AmigaOS4, amazing stuff.

The first **big** demo of the day was Jim Brain's Quantum-Link RELOADED project - a working recreation of the former QuantumLink service that operates over the Internet. This was a live demo, with a couple of dozen people chat-

ting on People Connection, or playing QuantumLink games like Sea Strike, from all around the world. The system was left set up for the entire day for anyone to use.

Dave Haynie (former Commodore employee and one of the designers of the C128) was the special guest for the afternoon. He played a video he had made showing some very rare prototype Commodore equipment, and held a lengthy Q&A session with the crowd.

Once Dave finished, Jim Brain gave the crowd a quick update on his uIEC project, a very small board that lets a Commodore use a FAT-formatted Compact Flash card (like those used in digital cameras) for storage. I always wonder, how does Jim get any sleep? After Jim finished, the teardown started, equipment was moved to the smaller conference room for the after party, and everyone went out for dinner.

### The After Party

For many, the after-party is the highlight of any Commodore Expo. Games are played, demos are coded and shown, and anything can happen. Six/Style kicked things off with his "Must See DTV" demo for the 64DTV on the projector, showing off some of the amazing effects possible with the DTV's new video modes. The room was full of C64s, SX64s and C128s, and Monty Python episodes were shown as well.

Meanwhile, Jeri Ellsworth had bought one of these crazy singing/dancing Halloween cat toys, and she disappeared into the corner of the room with a soldering iron. You know where this is going—she ripped out the microcontroller and hooked up a Commodore User Port adaptor.

With some simple POKEs we soon had the cat dancing. From there, Pegasus/RPG and I quickly coded a short routine to synchronize the cat's antics to SID output. Everybody laughed and laughed!

This was a perfect example of what can happen with you have such a diverse and knowledgeable group in one

place! Jeri knew exactly how to interface the hardware. Jim Mazurek just happened to have a user port edge connector in his bag of spare C64 parts. I had dabbled with controlling hardware from the user port of the C64 with my remote control truck project last year. Pegasus/RPG had his collection of SIDs he had written along, and used a tool written by Elwix to quickly figure out how to read from memory what instruments were active. Awesome!

### Sunday

The Toronto group left earlier than usual on Sunday, because we wanted to stop by Centsible Software's warehouse in Michigan. We met up with Bill (current owner of Centsible) and he let us run loose in the impressive facility, with shelves and shelves full of Commodore 64 games and programs, most of it brand new! I picked out a modest handful of games I wanted, and negotiated a price with Bill.

It was great to see what everyone, and especially the various crazy Commodore projects.

Hope to see many of you at the Toronto World of Commodore on December 3, 2005!

Leif Bloomquist



# Reflections on Computing—File Transfer

One of the issues facing Commodore users in 2005 is the availability and lifetime of 5 1/4" floppy disks. New disks are not being made any more, and some disks are starting to show errors due to their age.

So many Commodore users are archiving their important programs, documents, and even game high scores onto their PC into the common "D64" format. From there they can be used in an emulator, emailed to friends, or even burned onto CD-ROM for preservation.

This article describes some of the most common methods for doing these transfers. These methods also work the other way; you can download D64 images from the Internet or receive them in an e-mail, then transfer them back to real floppy disks.

One problem is that you can't read or write a Commodore disk in a PC 5 1/4 floppy disk drive. 5 1/4 PC drives (which are also becoming quite rare!) use an encoding technology called MFM (Modified Frequency Modulation), whereas the Commodore drives such as the 1541 use an encoding technology called GCR (Group Code Recording).

## CABLES REQUIRED

The usual solution to this problem is to connect a real Commodore drive directly to your PC. This is done by using a cable from the X1541 series. These connect between the parallel (printer) port on your PC to the Serial port on your Commodore disk drive.

There are several versions of this cable:

- X1541 - Basic cable, only works on older PCs
- XE1541 - Extended cable, works on newer PCs (DOS Only)
- XM1541 - Multitasking cable, works on newer PCs (Windows or Linux)
- XAP1541 - Active cable, works on all PCs under all operating systems (but is more expensive)

If you're handy with a soldering iron, you can make one of these cables yourself. Or, you can order them pre-made. More information, including schematics and ordering details, is available online here:

<http://sta.c64.org/xcables.html>

There are also high-speed "parallel" versions of the cable, but they require modifications to the Commodore drive and aren't covered in this article.

## TRANSFER SOFTWARE

Once you have the cable and are ready to transfer disks, you need to run special software on the PC for performing the transfer. All of these programs are free to download and use.

### STAR COMMANDER (DOS ONLY)

Star Commander was written by Joe Forster. It is a DOS program that allows you to transfer and modify either single PRG and SEQ files, or entire disks as a D64 image. It is a very powerful program with hundreds of features, but can be complicated to set up. It often requires some tweaking for the best performance, but it comes with very good and detailed documentation.

It must be run on a real DOS computer. The 'DOS Window' in Windows is not good enough, because Windows interferes with the program's timing. Use a DOS boot disk to turn your PC into a real DOS computer, at least temporarily.

Download Star Commander from

<http://sta.c64.org/sc.html>

### CBM4WIN

CBM4WIN was written by Spiro Trikaliotis. It is a Windows device driver that lets you read and write single files or full disks between a Windows computer and your Commodore drive. It comes with a set of command-line utilities for doing the transfer. `cbm4win` requires Windows NT 4.0, Windows 2000, or XP. It does **not** work with the XE1541 cable.

Download `cbm4win` from:

<http://www.trikaliotis.net/cbm4win.shtml>

### GUI4CBM4IN

GUI4CBM4IN is a program that I wrote to make CBM4WIN (see above) easier to use. It doesn't do any of the transfers itself. Rather, it simply provides a GUI (Graphical User Interface) to the `cbm4win` utilities. With this GUI, you can simply point and click to transfer your Commodore files and disks.

Download `gui4cbm4win` from:

<http://www.jammingsignal.com/gui4cbm4win/>

### CBM4LINUX

CBM4LINUX was written by Michael Klein. It is very similar to CBM4WIN (in fact, CBM4WIN is based on CBM4LINUX). It provides command-line tools for transferring your disks and files.

<http://www.lb.shuttle.de/puffin/cbm4linux/>

## OTHER METHODS

### RS-232

For smaller transfers, it is possible to use RS-232 serial communications to transfer files and data between your PC and C64. A null-modem cable is used to connect between the COM port of your PC and an RS-232 interface on the C64.



There are several RS-232 interfaces for the C64 that plug into the user port, but these are typically limited to 2400 baud. For higher speed, an RS-232 cartridge such as the SwiftLink or Turbo232 is recommended. The Turbo232 is still being manufactured by Click Here Software.  
<http://www.cmdrkey.com>

Once the PC and your 64 are connected, you can transfer files easily using the XMODEM, YMODEM, ZMODEM, or PUNTER Protocols. A terminal program is needed on both sides, such as Hyperlink on the PC and Novaterm on the C64. Any terminal program will work as long as they both support the same transfer protocols.

#### WARPCOPY64

This is one of the newest methods for transferring real Commodore Disks to and from your PC, written by John Selck. WarpCopy64 uses a novel method for transferring the disks. Your C64 and PC work together, transferring the data over an Ethernet network. This requires that you have the RR-Net Ethernet cartridge for your C64, and it does not require an X1541 cable.

This is the fastest option, the website for Warpcopy claims it is able to transfer a disk in 22 seconds. (Star Commander and CBM4WIN take about 2-3 minutes per disk). However it is also the most expensive, as the RR-Net and the Retro Replay cartridge (Which the RR-net plugs into) cost a total of 100 Euros, or about \$160 Canadian dollars.

For more information and to download the program:

<http://www.oxyron.de/html/wc64.html>

To Learn more about the RR-Net, visit:  
[http://www.jschoenfeld.de/news/news88\\_e.htm](http://www.jschoenfeld.de/news/news88_e.htm)

#### LIMITATIONS

None of these methods are capable of transferring copy-protected software. It is possible to preserve these disks, but special hardware and technical skills are required. However, there is a project called the C64 Preservation Project that is attempting to rescue these programs from disappearing forever, and they will help you preserve these disks. You can read more about the project here.

<http://rittwege.com/c64pp/>

There is no way to connect IEEE488 drives to the PC, so PET disks and disks made with drives like the SFD1001 cannot be archived using these methods.

Finally, these methods won't be able to fully rescue a disk that has already started to show problems. The best they can do is copy the disk, errors and all, and you have to analyze the disk yourself to determine where the errors are and what to do about it. Sometimes, the errors are not too serious, and by trying the transfer a few times you can get all the data across. But if you have Commodore disks with contents you wish to preserve, now is the best time!

Leif Bloomquist

## The future of the CBM and CP/M file Archives

From: Marko Mäkelä <marko.makela@hut.fi>  
 Organization: Helsinki University of Technology  
 Reply-To: [cbm-hackers@ling.gu.se](mailto:cbm-hackers@ling.gu.se)  
 Date: Wed, 15 Jun 2005 10:04:51 +0300  
 To: [cbm-hackers@ling.gu.se](mailto:cbm-hackers@ling.gu.se)

Subject: The future of the CBM and CP/M file archives at FUNET

The Commodore file archive at <ftp://nic.funet.fi/pub/cbm/> (later also <http://www.funet.fi/pub/cbm/>) was started a bit over 12 years ago, in the summer of 1993, as the successor of the Commodore file archive run by Robert A. Knop Jr. at [ccosun.caltech.edu](http://ccosun.caltech.edu). The CP/M archive at [/pub/cpm/](ftp://pub/cpm/) may have been started some time later. In the beginning, there were several maintainers, but in the last few years, there was only me, Marko Makela.

Unfortunately, I have not had enough time to maintain the archive for several years now, and the situation is not likely to improve soon. It was much easier to find time for projects like this as a student.

Therefore, I have asked Bo Zimmerman to continue the work.

The new home of the CBM and CP/M file archives is at <http://www.zimmers.net/anonftp/pub/cbm/>  
<http://www.zimmers.net/anonftp/pub/cpm/>

The [/pub/cbm/](ftp://pub/cbm/) and [/pub/cpm/](ftp://pub/cpm/) archives at FUNET and their mirror sites will probably be frozen in their current state, or they may disappear.

I would like to express my thanks to everyone who has contributed documents and files to the archive. It is a sad moment to give up the project, but I believe that it will benefit from having fresh maintainers.

Marko

*Message was sent through the [cbm-hackers](mailto:cbm-hackers) mailing list*

# Jeri's Story

**Enthusiast for old PCs gains fame for games**

*By John Markoff The New York Times*

*Tuesday, December 21, 2004*

**YAMHILL, Oregon** There is a story behind every electronic gadget sold on the QVC shopping channel. This one leads to a ramshackle farmhouse in rural Oregon, the home and circuit design laboratory of Jeri Ellsworth, a 30-year-old high school dropout and self-taught computer chip designer.

Ellsworth has squeezed the entire circuitry of a two-decade-old Commodore 64 home computer onto a single chip, which she has tucked neatly into a joystick that is connected by a cable to a television set. Called the Commodore 64 - the same as the computer system - her device can run 30 video games, mostly sports, racing and puzzles games from the early 1980s, all without the need to change game cartridges.

She has also included five hidden games and other features not found on the original Commodore computer that only a fellow hobbyist would be likely to appreciate. For instance, someone who wanted to turn the device into an improved version of the original machine could use a soldering gun to add a keyboard, monitor and disk drive.

Sold by Mammoth Toys, based in New York, for \$30, the Commodore 64 joystick has been a hot item on QVC this Christmas season, selling 70,000 units in one day when it was introduced on the cable shopping channel last month; since then it has been sold through QVC's Web site. Frank Landi, president of Mammoth, said that he expected the joystick would be distributed next year by bigger toy and electronics retailers like Radio Shack, Best Buy, Sears and Toys R Us. "To me, any toy that sells 70,000 in a day on QVC is a good indication of the kind of reception we can expect," he said.

Ellsworth's first venture into toy making has not yet brought her great wealth - she said she was paid on a consulting basis at a rate that was competitive for her industry - "but I'm having fun," she said, and she continues with other projects in circuit design as a consultant.

In an era of immensely complicated computer systems, huge factories and design teams that stretch across continents, Ellsworth is demonstrating that the spirit that once led from Silicon Valley garages to companies like Hewlett-Packard and Apple Computer can still thrive.

"She's a pure example of following your interests and someone who won't accept that you can't do it," said Lee Felsenstein, the designer of the first portable PC and an original member of the Homebrew Computer Club, which before it disbanded in 1986 was a seedbed for the personal computer revolution. "She is someone who can do it and do it brilliantly."

Ellsworth said that chip design was an opportunity to search for elegance in simplicity. She takes her greatest pleasure in examining a complex computer circuit and reducing it in cost and size by reusing basic electronic building blocks. It is a skill that is as much art as science but one that Ellsworth has perfected, painstakingly refining her talent by plunging deeply into the minutiae of computer circuit design.

Several years ago Ellsworth cornered Stephen Wozniak, co-founder of Apple Computer, at a festival for vintage Apple computers and badgered him for the secrets of his Apple II floppy disk controller. "I was very impressed with her knowledge of all this stuff, and her interest too," recalled Wozniak, whose fascination with hobbyist computers three decades ago helped create the personal computer industry.

Ellsworth attributes her passion for design simplicity to her youth in Dallas, Oregon, 35 miles, or 50 kilometers, south of Yamhill, where she was brought up by her father, Jim Ellsworth, a mechanic who owned the local Mobil station. She became a computer hobbyist early, begging her father at age 7 to let her use a Commodore 64 computer originally purchased for her brother and then learning to program it by reading the manuals that came with it.

In a tiny rural town without access even to a surplus electronics store, her best sources of parts were the neighborhood ham radio operators. She learned to make the most of her scarce resources. "It goes back to necessity," she said. "It went back to not having enough parts to design with when I was a kid."

Ellsworth is pursuing her passion: designing computer circuits that mimicked the behavior of her first Commodore. She turned to a series of mentors and availed herself of free software design tools offered by chip companies.

Her hobby produced a chameleon computer called the C-1. Changing its basic software could make it mimic not only a Commodore 64 but, ultimately, at least 10 other popular home computers of the early 1980s, including the Atari, TI, Vic and Sinclair.

Two years ago she showed it off at the Hackers' Conference, an annual meeting of some of the best U.S. computer designers. To her surprise, she received a rousing ovation - and a series of job offers.

One person who took notice was Andrew Singer, a computer scientist who is chief executive of Rapport, a start-up company based in Mountain View, California. Singer contracted with Ellsworth as a consultant and has since found that she has abilities that engineers with advanced degrees often do not.

"It's possible to get a credential and not have passion," he

said. He compared Ellsworth to Wozniak and to Burrell Smith, the hardware designer of the original Macintosh. Neither had formal training when they made their most significant contributions at Apple.

Ellsworth was also discovered by Mammoth Toys, which hired her to design the Commodore-emulating chip for the joystick.

She began the project in late June and finished, after a frantic last-minute trip to a Chinese factory, in early September - a design sprint fueled by the soft drink Mountain Dew and 20-hour days.

"It worked out tremendously well for our company," Landi, the president of Mammoth, said. "It has entirely changed the way we design electronic toys." He said that he had signed Ellsworth up for a series of design projects, although he would not disclose financial details.

Old-fashioned video games like the ones on Ellsworth's product have become less common recently because game enthusiasts expect a "wow" factor, like intense graphics or realistic images that older computers could not produce, said Shyam Nagrani, principle consumer electronics analyst for iSupply, a market research firm based in El Segundo, California.

He added, however: "The parents are likely to pick this up and say, Why not? The kids may like it."

When the C64, as the joystick is called informally, appeared on QVC last month, Ellsworth watched with obvious pride.

"It was one of one of the best projects I've ever done in my life," she said. "It was a tribute back to the computer that started it all for me."

## A Blast from the Past: The Commodore 64 DTV

### Tom's Hardware Guide Games & Entertainment: A Blast from the Past: The Commodore 64 DTV - Easter Eggs

Created: February 19, 2005 By: Darren E. Polkowski

Category: Games & Entertainment

#### Summary:

Thought the days of typing in Load "\*",8,1 were in the past, did you? Well they were, until Mammoth Toys brought the Commodore 64 back to life after being in the grave for over 20 years.

#### Easter Eggs

Even though it might be limited to 30 games, there are some hidden components inside the C64 DTV. Here are a few of the ways to get to some of the interesting items inside.

If you move the joystick from side to side while the startup screens are going (during power on or after a reset), once it gets to the blue on blue screen something different happens. Instead of the system typing in 'Load "\*",8,1' and taking you to the games, it types out 'Load "\$",8' and you get a list of other options. If you move the cursor up over the zero in "0 BLOCKS FREE" and then press the left fire button, different names and words will appear in the top left hand corner of the screen.

Names can appear in the top left corner of the screen. However, if you move the cursor up the list and press fire

over 1 through 7, one of those options will load and run. There are even more options if select the first one, "BASIC PROMPT." It will load a blank screen where you can explore and choose more things to do.

Here, on this new screen you can perform a list load to see everything on the C64 DTV. On this screen, when you press and hold the left fire button down, a keyboard emulator appears on the screen, which lets you type in various commands to access other functions.

To use the emulator, hold down the fire button and you can move the joystick around until you find the character you wish to select. When you let go of the button, that character will appear on the screen. For special characters like \$ or other keys that need the shift key depressed, first you select shift and let go of the button. Then when you press a regular button again, the secondary character is entered instead.

Some of the items you can load from this blank screen are programs like 'ENTROPY.' Once in the program you can press the special keys on the joystick and get more screens. By pressing the 'A' button and moving the joystick to the up position you get the next of 5 screens.

Five of the screen types are listed in this next screenshot.

From the clean screen you can type in 'Load "DTVTEAM",1,1 (Enter) and then 'RUN' (Enter) to get a picture of none other than the DTV Team themselves.

I won't show you this one but if you load "1337" you get another image. :)

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