

TPUG Newsletter

Views and News of Toronto Pet Users Group

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

Spring — 2014

From your President ... a report from the 2014 AGM

It's hard to believe that TPUG is now entering its 34th year as a club. We have continued to build on the successes we have had in the past and at this time we can look forward to many more successes in 2014 as our club continues to grow. The TPUG Annual General Meeting is the time of the year that we can look back over the past year, evaluate where we stand and look ahead to 2014. This year we made progress on:

Membership: Membership continues to be stable. We got a few new members this year and continue to get new members. Receiving new memberships shows that our efforts this year have paid off as we reach out to the vintage computing community in Toronto, Canada, the US, and beyond!

Chapter Meetings: TPUG chapter meetings continue to be fun and interesting events where we can check out a demo or two, showcase the latest gadgets for Commodore computers, chit-chat about upcoming and current events in the Commodore community and as always, reminisce about the glory days of Commodore computing!

Finances: As a club we strive to be diligent with the finances, and we continue to be in a very sound financial position. Our club has managed expenses well and this allows us to offer more to our club members, plus contributes to the overall operation of the club.

Shows: As always, World of Commodore was a hit with fans of all things Commodore and WOC 2013 was well

attended again this year. We had interesting demos, still more Commodore merchandise than last year, how-to advice from the experts and basic Commodore fun that always makes the World of Commodore the place to be on the first weekend of December.

Library: We've continued once again to make available the library CD, and have ordered an additional run due to demand, a great sign! We are selling the CD on e-bay for the first time this year and interest has been good. We're also continuing to prepare to work on cataloging the various TPUG newsletters for preservation.

Newsletter: The TPUG newsletter continues to be published. We typically try for twice per year, Spring and Fall (the World of Commodore edition just before the main show in December). Current articles continue to be added to keep us informed of the club's activity and the Commodore scene

Website: The website continues to be our primary communications tool for TPUG. We've been diligent to maintain, add and improve things on our website. Check out our website and you will find information on our TPUG Store, Forum pages, Useful links, our archive section. There's lots to discover at www.tpug.ca !

Webstore: This year we managed to find a volunteer for the TPUG store, although the store will be offered to the public as more of a boutique format rather than a pick-and-pay arrangement. We found it too cumbersome to constantly be running to the

locker for just a few items so we will be offering our 'picks of the month' for sale in the store. At time of the AGM the store is yet not operational but we are working to set this up as it is a primary source of club revenue.

The club stands in a good overall position going into 2014. Considering the many other clubs that did not make it out of the 1980's, 1990's or beyond 2000, we've got it pretty good as a club. We still need volunteers to step up to help the club with store sales, World of Commodore, locker work, etc. TPUG runs entirely on volunteer power and it's up to all of us members to lend a hand. Join the board, help us with the tasks at hand, and it can be fun and rewarding knowing that your contribution helped TPUG!

Thank you for coming out to the AGM and supporting TPUG. You add the fun and excitement to the club, and that's what we're all about. At this time I want to particularly thank the men that make up the TPUG board of directors. They volunteer their time and efforts helping TPUG remain a successful users group and it's much appreciated.

It remains my belief that with the right people on board and a strong club, we'll be able to support the Commodore user community well into 2014, and beyond!

Greg Van Laere
TPUG President

Member Information

Voice Info

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

Website: www.tpug.ca
e-mail: info@tpug.ca

Membership Rates

**\$15 per year
else, with e-mailed Newsletter,
\$10 per year**

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Shows	Tom Luff & Ernie Chorny
Webmaster	Ian Colquhoun

Newsletter

Editor John Easton (416) 251-1511
jeaston@rogers.com

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 next 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 - **Leif Bloomquist** (416) 737-2328 leif@schemafactor.com
or **Ernie Chorny** (905) 279-2730 chorny@bell.net

From your Editor ...

Welcome again to the chit-chat of Never-say-die Commodore Computer users.

With this issue, we've brought you up to date on TPUG happenings and celebrations. You'll find mention of Martin Brunner's visit (from Germany) to us at TPUG last fall, explanation of the crawl-screen program that introduced the latest World of Commodore event in December, a report on that event, our president's overview of TPUG in his AGM report. Lotsa stuff, but you might notice that we're cutting down on the Joe's World articles ... ya see, Joe Quittner is now at the venerable age of 90 ... we still have his articles, but let's try to stretch them out to still be available while HE is..

In the form of a teaser, let me remind you that we still have in the file bin a fantastic note from Jim Butterfield ... in the form of lecture notes from a talk he gave at York University in 2005. Look for it in the next issue when hopefully I'll have more room. And, perhaps I just might have some space left for comment on fellow Editor and Commodore user, Lenard Roach's foray into publishing ... his opus, entitled *Run/Stop Restore* is certainly a journey down Memory Lane.



And, in case you don't remember, it was in May of 1964 ... 50 years ago that BASIC was introduced as a language at Dartmouth College on New Hampshire. And, come to think of it, isn't Bill Gates the one credited with the original form of BASIC which accompanied Commodore machines of the time?

Yrs respectfully
John

TPUG Newsletter is meant to be published somewhat twice yearly by the Toronto Pet Users Group (TPUG). TPUG is a volunteer non-profit club dedicated to the service and support of owners and users of Commodore computers.

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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.



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Joe's World 26 ... ROM into RAM, "ready", list

The computer has $256*256=65536$ Random Access Memory (RAM) locations that can be written into, and also has chips that contain Read Only Memory (ROM). The various BASIC routines that are in ROM locations 40960 to 49151 and the ROM locations of the operating system, which includes the KERNAL, are 57344 to 65535. Normally if, for example, you peek(57777) then you get the content of the ROM, not the RAM, but it is possible to switch off these two ROMs, one at a time only, to be able to read RAM instead of ROM at a given location.

Here is a program (save it after typing, before running!) that first copies into RAM what is in ROM, then operates a switch so that readings will then be from the RAM instead of from the ROM. This then permits changes to be made to the machine language routines.

```
0 rem" ROMs to RAMs by Joe Quittner
100 for i=679 to 748:read j:if j>255 then
300
101 poke i,j:next
200 data 177,251, 145,251:rem" Copies ROM
into RAM
201 data 165,251, 197,253, 208,7, 165,252,
197,254, 208,1, 96: rem" END?
202 data 32,190,2, 24, 144,233:rem" Incre-
ment and repeat
203 data 230,251, 208,2, 230,252, 96:rem"
Subroutine increments 251/2
299 data 999
300 print" Copy which one, BASIC (b) or
KERNAL+ (k)?"
301 poke 204,0:get a$:if a$="" then 301
302 print a$:poke 204,1:poke 782,0:rem" .Y=0
303 if a$="b" then 310
304 if a$="k" then 320
305 goto 300
306 print" DONE":new
310 poke 251,0:poke 252,160:poke
253,255:poke 254,191:sys 679
311 poke 1,54:goto 306
320 poke 251,0:poke 252,224:poke
253,255:poke
54,255: sys 679
321 poke 1,53:goto 306

679 LDA (255),Y      696 JSR      702:rem" In
                    crement 251/2
681 STA (251),Y      699 CLC
683 LDA 251          700 BCC      679:rem" End
                    of loop
685 CMP 253          702 INC 251
687 BNE             696 704 BNE 708
689 LDA 252          706 INC 252
691 CMP 254          708 RTS
693 BNE             696
695 RTS
```

Here is an application example of what can be done. The usual READY message of BASIC will be replaced by a single dash, and the extra line feeds will be removed:

```
1) Move BASIC into RAM per above
2) poke 41847,45:poke 41848,13:poke 41849,0
```

Another application involves the LIST command. It usually is final, no additional statement can follow it.

```
10 list 10:print "abc"
```

only lists, without the following abc. But this program changes the BASIC routine so that more statements can follow.

```
10 for i=820 to 1023:read a:if a>255 then
sys839:new: rem" Save before running!"
11 poke i,a:next
9000 data 230,251, 208,2, 230,252, 96:rem
"Increment 251/2
9001 data 170, 169,0, 32,205,189, 169,32,
32,210,255, 96:rem" Print #
9010 data 160,0 132,251, 169,160, 133,252,
169,255, 133,253, 169,191, 133,254:rem" Ini-
tial RAM address
9011 data 177,251, 145,251:rem" ROM --> RAM
9012 data 165,251, 197,253, 208,24, 165,252,
197,254, 208,18:rem" END?
9013 data 169,54, 133,1, 169,234,
141,187,166, 141,188,166, 169,96, 141,20,167
9014 data 96
9020 data 32,52,3, 24, 144,216:rem" Change
LIST routine
9050 data 8, 133,2, 134,3, 132,4, 104,
133,5, 96:rem" Save .A .X .Y .P
9051 data 166,3, 164,4, 165,5, 72, 165,2,
40, 96:rem" Restore .A .X .Y .P
9052 data 166,2, 32,60,3, 166,3, 32,60,3,
166,4, 32,60,3
9053 data 165,5, 56, 233,48, 32,59,3,
96:rem" Print .A .X .Y (.P-48)
9999 data 999

820 inc 251          883 lda # 96
822 bne             826 885 sta 42772
824 inc 252          888 rts
826 rts
-----
889 jsr             820:rem" In-
                    crement 251/2
827 tax
828 ldy # 0          892 clc:rem" End of loop
830 jsr             48589 893 bcc 855
833 lda # 32        895 php:rem" Save .A .X
                    .Y .P
835 jsr             65490 896 sta 2
838 rts             898 stx 3
-----
900 sty 4
839 ldy # 0          902 pla
841 sty 251         903 sta 5
```

```

843 lda # 160          905 rts
845 sta 252            -----
847 lda # 255          906 ldx 3:rem" Restore
                        .A .X .Y .P
849 sta 253            908 ldy 4
851 lda # 191          910 lda 5
853 sta 254            912 pha
855 lda (251),Y        913 lda 2
857 sta (251),Y        915 plp
859 lda 251            916 rts
861 cmp 253            -----
863 bne                889 917 ldx 2:rem"Print
                        .A .X .Y .P-48
865 lda 252            919 jsr                828
    
```

After running this program try this:
list 10:sys 917:sys 9060 sys 895:

Joe Quittner TPUG, December 17, 2009

Drones. 3D Printing. The Future.

Need we say more?

For two days this November, the Toronto Mini Maker Faire is going to be onsite at the Toronto Reference Library! We're excited to announce that the Toronto Public Library will be our partner for 2014.

We're calling on all the innovators, artists and hackers from across the GTA to save the date and come to Toronto's greatest show and tell. In the meantime, come and check out the Library's new maker space, the Digital Innovation Hub.

Save the dates -
Saturday & Sunday, November 22-23
| Toronto Reference Library

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<http://makerfairetoronto.com>

A Visit to the Toronto PET User Group

By Martin Brunner—from Lotek64, December '13 as translated by Mike Stein

Anyone who follows news about Commodore or perhaps even reads the corresponding newsgroup will sooner or later run across the Toronto PET User Group. Here and there will be a mention of one or another meeting in Toronto, often with well-known names from the Commodore scene. One such event was on December 7, 2013, when TPUG hosted their "World of Commodore", which was streamed on the Internet.

TPUG is the second oldest Commodore User Group and the oldest that has been continuously active. At first the main focus of the club was the PET, popular and widely used in Canada, but meanwhile the focus of the meetings every third Thursday of the month now includes the whole range of Commodore equipment.

So, when I was recently in Toronto to visit friends and relatives it was obvious what I had to do on such a Thursday! Leif Bloomquist, with whom I had previously been in contact, picked me up from the subway station; together with another visitor we went to where it was happening, at the Alderwood United Church where some space is made available for the club's use. I had mentioned to Leif that I would be bringing two demos from Graz, including my Dual Monitor Basic Demo for the C128 (which I

will discuss in more detail in another edition). Since the required equipment was already stored there, to my surprise everything including seating for the audience was already professionally set up, and my concerns that the setup would take considerably more time than the simple demos were quickly dispelled. After I first showed the CTG-demo from Martinland (C64-mode) and then the dual-demo for the C128, there were a lot of curious questions about the C128 and its Basic V7. I still had a few more examples on the disk, and since there is not much discussion about the C128 these days there was quite a bit of interest, especially about the differences with the PET Basic. When I happened to mention the Action Cartridge 6 in passing there were some smiles among the audience - one of its members was the person who had acquired the rights to the Super-Snapshot back in the day.

Afterwards I was presented with one of TPUG's Software Library CDs; as souvenir of the Commodore meetings in Graz I had also brought diskettes containing our Demos as well as a patched Amiga version of Amix (so you can beat each other up without the intervening sequences) in my luggage. Of course I also could not pass up checking out the Commodore PET.

I can not remember when I had ever seen one at one of our meetings back home. Even a Commodore typewriter was also displayed.



After some more chatting and mingling the event came to a rather early conclusion; at least on this evening it confirmed a friend's observation that Canadians don't have much meat on their backsides. [*translator's note ... Martin is referring to the fact that we don't usually meet at a local pub after our meetings, as would appear to be the practice where he comes from*] At least there was no danger that I would have to make the next day's flight to Montreal with a headache.



PS: Just in time for "Commodore World," an article about this meeting appeared in the autumn 2013 issue of the TPUG newsletter.

Links:

<http://csdb.dk/release/?id=110215>

<http://csdb.dk/release/?id=115968>



World of Commodore 2013

By Paul Quirk



Yesterday marked an important event I've been looking forward to all year: The annual World of Commodore show, hosted by the Toronto Pet User's Group (TPUG). It's an annual event where I get to meet old friends, make some new ones, and revel in the shared nostalgia that is the world of Commodore computers.

One of the things I really look forward to is meeting new people and enjoying the unique displays they put on for attendees. Loui, who operates a vintage computer museum, brought with him a small sampling of rare items, generously offering a hands-on experience. Notable were the Commodore 116, the Commodore MAX machine, and a box for developers of the Commodore 64. Loui was very knowledgeable and friendly, providing a unique insight and background to each item in his collection.



reasonable prices. I was able to buy JiffyDOS for my Commodore 128 from Joe. Joe is also a great source of information, and a great guy to talk to. He's definitely an asset to the Commodore community in this area.



Taking place at the Admiral Inn in Mississauga, Ontario, it's apt that this annual event takes place not very far from where Commodore was founded. Greeted by the friendly smiling faces of Greg, Ian, and Tom, the entry fee of \$10 for non-members and \$5 for members represents excellent value. It was an opportunity for members like myself to renew our annual membership for a mere \$10.



My friend Dan was present, with two Amiga 1200's and a Commodore 64 on display. One Amiga 1200 was playing YouTube videos, while the Commodore 64 played various demos and was connected to the hotel network. I was impressed with a demo of Still Alive from my favourite game, Portal, playing in razor sharp high resolution on his Commodore 64. It appeared to show a true 80 column display.

There was plenty of opportunity to buy vintage Commodore goodness from TPUG, with Amigas and 8 bit Commodores for sale, along with their peripherals, software, cables, manuals, magazines, and more. As usual, there was a freebie table, where I saw a Commodore 128, some Commodore 64's, 1541 disk drives, monitors, and various disks, magazines, and programs. There was also the traditional raffle table, with prizes including a Commodore calculator. There really was something there for everyone.



The first to present was Matt Brudzynski of Comma 8 studios, returning to provide us with an update from last year's presentation. Having brought a modern version of M.U.L.E. to iPhone, Matt provided us with insight to the ongoing process and challenges of this endeavour, sharing with us the harsh criticisms and



A regular at World of Commodore, Joe of JP PBM provided his usual variety of Commodore hardware and software, both new and old, for very

praise he's received. He's going to use the lessons he's learned thus far to update this great game. I'm looking forward to the Android debut.



Next up was John Hammarberg of Censor Design, demonstrating Pixcen for Windows. Pixcen is an open source application that makes it easy for developers to develop graphics and sprites for their games and demos on the Commodore 64. John's demonstration provided us with a how-to on how to get the most out of this development tool.



Another regular at World of Commodore and Commodore events in general, Leif Bloomquist demonstrated his wireless motion sensing glove for the Commodore 64. Leif began his demonstration by explaining the background on this technology, the SoMo by SonicWear, and how he arrived at the idea of implementing it on the Commodore 64, detailing the reasons why he chose the materials he did. He then provided a demonstration on his favourite game, Zone Ranger. After his presentation, Leif provided opportunity for attendees to try out his glove on various games.

After Leif's demonstration, we were treated to a viewing of Robin Harbron's latest song, History, which is a musical tribute to Robin's personal history leading up to his owning his very first Commodore 64 computer. You can enjoy here:

<https://www.youtube.com/watch?v=djQ1Qk-9xbo>



Next up was Chiron Bramberger, demonstrating his musical experiments on the PET. In his demonstration, Chiron explains the challenges he faced in getting sound from the PET, how he discovered another voice in the PET with the discovery of another oscillator, and how this led him to discover other voices in the Commodore 64 and Vic 20. He then treated us to demonstrations on how he was able to extend the tonal range of the PET, provide stereo output, and how he made effective use of his discoveries to generate musical tones from the PET.

Keeping with the theme of the musical arts, Dan Laskowski provided us with a demonstration on how he made effective use of MIDI with Fastfingers for the Commodore 64. Most interesting was his ability to translate the velocity of pressure on a key of a KORG keyboard to change the output of the sound being generated.

There was plenty more to see...a working colour PET, a KIM-1, an original PET, interesting case and system modifications, and interesting stories from some great people. It was a day filled with fun, wonder, and vintage computing goodness. I'll leave you with these pictures of the event to enjoy.

Paul Quirk

Technical Details of the World of Commodore I3 Invitation Demo

Download: <http://www.tpug.ca/?p=283>

By John Hammarberg

Tools used: Goatracker 2.72, c6510 assembler (my own assembler), Visual Studio C++, Pixcen (pixel editor), Photoshop

Magnar Harestad composed the music in Goatracker 2.72. I don't know the details but he found the correct settings for NTSC productions. Goatracker is a cross platform editor. It's using Re-SID for PC playback and that gives a fairly accurate representation of the final sound on C64. This specific song he made for the 6581 SID as it's the most compatible. It's also possible to compose specifically for the 8580 SID. The later got actually working and consistent filters so certain sounds can only reliably be done with it as a target.

I started out using hires for the graphics but in the end I converted in to single color char mode as I could fit the logo in a charset and then use screen data. This made it easier to flash the background color to fade in the graphics.

The globe was prepared in Photoshop from a world map, a grid and the spherize effect. It was then scaled from 1:1 pixel aspect ratio to 0.75:1 to actually look round on an NTSC C64 (because C64 pixels are not square). The final cleaning up and export to C64 was done in Pixcen.

The C= logo was scaled in Photoshop, and then fitted into 14 sprites placed on top of the character graphics using Pixcen. A couple of interrupts moved sprites down halfway through the frame to fool the VIC2 chip to display 14 sprites (multiplex). This is a very common trick used by many old games. I'm sure the MOS/Commodore engineers had this trick in mind when the chip was designed.

The scroll is pure single color bitmap manipulation, no VIC2 tricks were used. The only 3D calculation needed was done in C++ floating point precision beforehand to get the perspective correct (standard geometry math). Some careful rounding was done to translate the final data back to integers.

The idea of the scroller is the same as a rol-scroll where bits are shifted left with ROL. By performing ROL on each byte from the right to the left, the carry flag will help moving the graphics between bytes, one line at the time. New bits of graphics are added to the far right for each iteration.

In this case, the scroller is not using ROL but the principle remains the same. More on that in a bit.



The scroller uses 16 lines of graphics and each line gets a different (virtual) pixel width. This makes the bottom line look like it's scrolling faster. The graphics in the bottom line also looks wider.

The trick here is that the pixel width might not be an integral number of 1, 2 or 3. The pixels can have any width like 1.234. The best way to solve this is to have variable pixel width throughout a line so the average pixel width sums up to the desired width.

Some bit examples that might help explain:

1 2 3 4 5 6 7 8 -Simply one pixel per bit of graphics.

A pixel width of 2 would look like: 11 22 33 44 -Two pixels per bit of graphics.

A width of 1.5 would become something like: 1 22 3 44 5 6
The 6th bit of graphics will have to continue in the next byte to the right.

Now the ROL-like operation:

We want to shift all the graphics left one step and the next iteration with width 1.5 should look like: 2 33 4 55 6 7..
Graphics bit 1 was taken out (to carry so to say). Graphics bit 2 shrunk from two bits to one bit and took over the position where graphics bit 1 previously was. Graphics bit 3 was moved left and expanded to cover two bits. etc.

Now it's clear it would be terribly hard to ROL graphics like this without complex code to check bits and perform mask operations. The cost of cycles per byte of graphics would be very expensive.

Instead the old trick of look-up tables is used.

LDX data
LDA shiftlookup,X
STA data

The tables are the key and are all 256 bytes. For each unique combination of bits, the tables have the pre-calculated answer for what the next iteration will look like. Different bytes and different lines need different tables so it's easy to imagine cases where the tables eat all of the RAM. By merging identical tables and tables with data that didn't collide/conflict I got it down to 11 tables (less than 3K).

The scroller consists of 16 lines * 40 bytes per line, that is 640 bytes of data. The code iterating through all these bytes is un-looped. This is several kilobytes of branch-less code. This code and the tables were generated by a loop in C++, printed to a text file and then included in the assembler source.

We are missing one important thing still and that's the carry. After the previous code we still hold the original data in the X register. Now we can use that information for the next byte. Another lookup is used!

Here is the final code covering several bytes of graphics. Note how the X and Y registers are used:

```
line9:
    ldx scrollmap9+39*8
    lda shift0,x
    sta scrollmap9+39*8
```

```
ldy scrollmap9+38*8
lda shift0,y
ora shift1,x
sta scrollmap9+38*8
```

```
ldx scrollmap9+37*8
lda shift2,x
ora shift3,y
sta scrollmap9+37*8
```

```
ldy scrollmap9+36*8
lda shift2,y
ora shift3,x
sta scrollmap9+36*8
```

```
ldx scrollmap9+35*8
lda shift8,x
ora shift3,y
sta scrollmap9+35*8
```

etc....

The remaining thing is to feed new bits of graphics to the right. Some masking is required there due to the variable pixel width and the perspective but it's nothing special.

In the end this is 16 cycles per byte of graphics so moving all the 640 bytes forward cost 10240 cycles per iteration. Still that is fast enough to be done on each frame update, 60 times a second. There are even some CPU cycles left to play music, feed new graphic parts and more.

Annual General Meeting – Feb 20, 2014

Library Report

Sales of our library CD have continued to be brisk over the past year. This year we put the library CD on e-bay for the worldwide community to view and buy and we have sold several. It seems at every board meeting there is a report of another few CD sales on e-bay so it's great that TPUG is getting the exposure. There have been no new additions to the TPUG library this year but we continue to discuss issuing an update CD at some point with more content. If you have any new Commodore 64, PET or VIC-20 programs that would be a great addition to an updated CD, let us know!

The TPUG library and the administration of it has morphed more into a 'preserve before we lose it or bitrot gets to it' phase as we attempt to catalog, scan, archive and preserve TPUG's rich history. Plans are underway to scan and preserve the many newsletters that still do not appear on our website. We've compiled a list of missing magazines, newsletters and updates that we will be scanning, converting to PDF and preserving, with the goal of putting them on the TPUG webpage. The TPUG historians are doing their part to preserve the legacy of TPUG!

Submitted by: Greg Van Laere

Gleanings from the net ... specifically, comments from torontocbm

Happy New Year TPUG!
from Chiron Bramberger

I made an 8-Bit Robot Parody of the Miley Cyrus song Wrecking Ball. I recorded the lead part via MIDI with PetSynth.

I hope you enjoy it!
<http://youtube/kjxvEjdx810>

Hey TPUG!
Just wanted to let you know that you can check-out another demo of PetSynth here:
<https://www.youtube.com/watch?v=4uJrotRwmGE>

I have several outtakes I may upload as well when I get a change to edit them.

I will be releasing all this stuff as open-source - not just for the PET but these machines as well: C64,

VIC-20, PET, NES, and BBC Micro.

Also, I've released 2 patches for free for musicians. One for PetSynth on the PET, and one that's an EMF recording of a hard drive. You can download them from here and use them in Kontakt and Logic (and raw samples too you can import):
https://www.dropbox.com/s/3o9yb40hxjm87oy/Trash_Secret_Free_Instruments.zip

You can also get a free copy of the track I used and played to when I gave the demo at World of Commodore last year Dec 2012. You can download it here:
<https://soundcloud.com/chironbr/rash-secret-second-demo>

Thanks for all the encouragement!
-Chiron

from Rob Adlers:

Not sure how many are aware of this, but there is a current magazine out there for C64 users.

<http://reset.cbm8bit.com/>

from Leif Bloomquist:

Tweeting on a Commodore VIC 20 Four years since then? How time flies! (Cool stuff, Syd)

<http://www.torontosun.com/2014/02/20/tweeting-on-a-commodore-vic-20>

Leif Bloomquist |
leif@schemafactor.com | +1 416-737-2328 | Check out my blog!
<http://www.jammingsignal.com>

Basic is 50 years old ...

May 1, 1964 at Dartmouth College, NH John G. Kemney and Thomas E. Kurtz introduced BASIC to the world.

In honour of the occasion, we're proud to present "Happy Birthday" written in Commodore BASIC, as it appeared in Compute! Magazine in October 1984:

```
100 PRINT CHR$(147); CHR$(154)
101 READ S : IF S = 0 GOTO 109
102 READ S$: GOSUB 1000
103 READ X1, Y1, X2, Y2, X3, Y3
104 GOTO 101
109 RESTORE : PRINT CHR$(19); CHR$(5)
110 L1 = 54272 : L2 = 54279: L3 = 54286
120 H1 = L1 + 1 : H2 = L2 + 1 : H3 = L3 + 1
130 V1 = L1 + 4 : V2 = L2 + 4 : V3 = L3 + 4
140 POKE 54296, 15
150 POKE V1 + 1, 9 : POKE V1 + 2, 0
160 POKE V2 + 1, 36 : POKE V2 + 2, 36
170 POKE V3 + 1, 18 : POKE V3 + 2, 170
180 T = TI
200 POKE V1,16 : POKE V2, 32: POKE V3, 16
210 READ S : IF S = 0 GOTO 290
212 READ S$: GOSUB 1000
220 READ X1, Y1, X2, Y2, X3, Y3
230 IF X1 THEN POKE H1, X1: POKE L1, Y1: POKE V1, 17
240 IF X2 THEN POKE H2, X2: POKE L2, Y2: POKE V2, 33
250 IF X3 THEN POKE H3, X3: POKE L3, Y3: POKE V3, 17
260 T = T + S
270 IF T > TI GOTO 270
280 GOTO 200
290 FOR J = L1 TO 54296 : POKE J, 0: NEXT J
```

```
295 PRINT CHR$(154): END
300 DATA 40, "{2 SPACES}HAP", 34, 75, 0, 0, 0, 0
310 DATA 20, " PY ", 34, 75, 0, 0, 0, 0
320 DATA 60, " BIRTH ", 38, 126, 28, 214, 5, 185
330 DATA 60, " DAY ", 34, 75, 28, 214, 0, 0
340 DATA 60, " TO ", 45, 198, 38, 126, 5, 185
350 DATA 60, " YOU ", 43, 52, 30, 141, 4, 73
360 DATA 60, " , ", 0, 0, 0, 0, 0, 0
370 DATA 40, "{2 SPACES}HAP", 34, 75, 0, 0, 0, 0
380 DATA 20, " PY ", 34, 75, 0, 0, 0, 0
390 DATA 60, " BIRTH ", 38, 126, 30, 141, 6, 108
400 DATA 60, " DAY ", 34, 75, 30, 141, 0, 0
410 DATA 60, " TO ", 51, 97, 34, 75, 4, 73
420 DATA 60, " YOU ", 45, 198, 28, 214, 5, 185
430 DATA 60, " , ", 0, 0, 0, 0, 0, 0
440 DATA 40, "{2 SPACES}HAP", 34, 75, 0, 0, 0, 0
450 DATA 20, " PY ", 34, 75, 0, 0, 0, 0
460 DATA 60, " BIRTH ", 68, 149, 22, 227, 5, 185
470 DATA 60, " DAY ", 57, 172, 25, 177, 0, 0
500 DATA 60, " AN ", 21, 154, 30, 141, 7, 163
480 DATA 60, " DEAR ", 45, 198, 28, 214, 7, 53
510 DATA 60, " DREW ", 19, 63, 30, 141, 0, 0
520 DATA 60, " , ", 0, 0, 0, 0, 0, 0
530 DATA 40, "{2 SPACES}HAP", 61, 126, 0, 0, 0, 0
540 DATA 20, " PY ", 61, 126, 0, 0, 0, 0
550 DATA 60, " BIRTH ", 57, 172, 34, 75, 8, 147
560 DATA 60, " DAY ", 45, 198, 28, 214, 0, 0
600 DATA 60, " TO ", 51, 97, 30, 141, 4, 73
610 DATA 60, " YOU. ", 45, 198, 28, 214, 2, 220
620 DATA 0
1000 PRINT S$: : IF RIGHT$(S$, 1) < " 0 " THEN PRINT
1010 RETURN
```

Via "The Inquirer"
<http://www.theinquirer/news/2343008/basic-is-50-years-old>

**TORONTO PET USERS GROUP
C/O JOHN EASTON
258 LAKE PROMENADE
ETOBICOKE, ONTARIO M8W 1B3**

— Spring 2014 —

