



THE EDITOR'S GOZILLA

-by Lenard R. Roach

Here it is the beginning of 2013, and I have done next to nothing on my Commodore 64/128. It seems like time has stood still for the use of the machine at the not-so-famous Roach Hotel.

"What have you been doing that has taken you away from your time on the Commodore, Pops?"

Ah, good question! Well, right now my writing career has been putting more in line with comedy for children between the 1st and 6th grades, especially in the field of skit writing for churches with small groups of children to educate and entertain. On December 29th of last year, unbeknownst to me, Createspace.com published my third book overall and the first book in the series, "Skits For 2nd Hand Puppets." I was surprised to see that I have two books now on amazon.com and I still had more work to do on it, but I guess that the folk there saw no problem and went ahead and published the book.

Sadly, in order to meet the criteria needed to get published for free like you can on Createspace, you have to pull all of your documents out of your Commodore word processor of choice and convert them into a format easily comparable to a .PDF using first the program "Big Blue Reader" to transpose the Commodore format into Word,

then using Word to convert the text into a .PDF.

All right, ladies and gentlemen of Commodore, where did I miss the boat? I know by now some great mind of programming has come up with a GEOWrite-to-.PDF converter, I just haven't found it yet. More and more I have been forced by sheer demand of the changing times to put away my Commodore and work solely on my Compaq to meet the formats of the day. With the SuperCPU being out now for over a decade, I would think that's some inventor would have taken up the challenge. Maybe there's not much of a call for it, but I hope that with the creation of publish-for-free sites like createspace, more users like me will also publish their exploits with the Commodore computer.

"So, Pops, what have you been doing with your Commodore time?"

Other than making the newsletter for the Fresno Commodore group, nothing much. All my time seems to be spent on the Compaq. However, when it's bill paying time, I pull out the ol' "Check It Out" and "TEA 4 2" along with "Money Manager" and "The Ledger" and start working out those bills.

And speaking of "The Ledger," I should have known that one of the easiest programs I had to write would also have the most glitches and bugs. This time it's in the "Update Account Information" selection of the program. What I tried to do was create a shortcut to saving the data information after it had been updated by simply having the user double RETURN and it instantly updates, but watch out! The bug will save all your information to a previous account already sent to the buffer! A user fix to this hiccup is to simply answer "No" to the

"Archive As" request and type in the proper file name. As the programmer of this beautiful mess-terpiece, I need to write a whole new OPEN command subroutine with its proper inputs and disk drive assignments, which was what I was trying to avoid doing in the first place. Oh well, as Alan Hale Jr. once said in a "Gilligan's Island" episode: "Hurried work is worried work and a job not well done is not a well done job." Come to think of it, I haven't done too much as in writing intro screens and users manuals for the three programs I've worked on, and there are updates I need to perform to make these three programs better for the user and more stable in data structure. By rights, I have no reason to sit on my "blessed assurance" and not do anything with the Commodore, so I'd better get up and start getting some of this stuff out together.

Please try to remember that, if you were a vendor at the 2012 CommVEx, to check with your tax preparer to see if it will benefit you to take the tax write off offered under the tax code. I found out that, this year, it would not behoove me to take the write-off for 2012, so I will withhold my status till the next time I go to CommVEx, which is projected to be 2014. The Roach Hotel staff will be home for 2013 due to vacation restrictions and that my son would like to do more than play Xbox in his hotel room during the visit. He will be 21 by the time the 2014 CommVEx will be around so we will come then. Also, as I said before in previous articles, I would like to bring new product to the convention. I think that attendees are tired of hearing me rattle about the four programs I have done before.

With this new information, it's time for me to make some backup disks, get out my "Med-res" graphics program, set my Compaq for "music," and start digging into some of these projects that are waiting to be

done. Hopefully I'll have a bigger report to do other than drivel over things that are not done.

Enjoy the rest of the newsletter ...



FCUG MEETING REPORT January 2013

-by Dick Estel & Robert Bernardo

Our January meeting was no ordinary one. Sunday, January 20 was SX-64 Day around the world, celebrating the release 30 years ago of Commodore's iconic "executive" computer. We were part of the Global SX-64 Party, an international celebration of the world's first color transportable computer.

Robert arrived about 45 minutes early to start setting up the SX's and the video and still camera equipment. Dick arrived with a third unit but had trouble with the keyboard not registering all key presses. Somehow that cleared up later (maybe just inserting the keyboard cable better?). We were missing member Alfredo Mijango, another SX owner, as well as Robert's modded SX, which was still with Ray Carlsen for keyboard repair.

Also present were Roger Van Pelt and

Louis and Vincent Mazzei, who brought Vincent's rare, silver-labeled VIC-20.

To start off the meeting, we viewed a Commodore SX-64 commercial from 1984, the commercial with the catchy Commodore tune. We took a few photos with Dick's Canon digital SLR, and then a little bit after noon, we connected via Skype with Berry de Jager, organizer of the day, who was in the Netherlands. To our surprise, he was back at his house and not at the Starbucks in Amsterdam.

He explained that he and the Dutch users had met during the afternoon from about 1 to 5 p.m. (with about 8 SX's) and that he had to get back through the snow before it got dark. No matter... we had a good time Skyping away as we ate our lunch and as Robert showed him little bits and pieces that we had brought to the meeting (Jason Ranheim PC-8 board, Robert's Turbo 50 cart, Capture II cart, Koalapad with Dancing Bear disk, the game Worms!, Green Valley Publishing Business Software, Vincent's VIC-20, and of course, the SX's). After over a half hour of Skyping, the lag with the Net connection was getting to be too great, and Berry signed off.

We finished our lunch and headed to the SX's so we could try out the programs and hardware bits. During that time Robert took photos with his Nikon film SLR, and to top off the day, took video of the members next to the SX's with each person giving the SX "salute."

Photos of the event are on line at <http://retro-link.blogspot.com/2013/01/fcug-celebrates-sx-64-30th-anniversary.html>. In addition, there is more information at Berry's site, <http://c64.berrydejager.com/>, including a list of the places and people participating in the international event.

In non-SX64 business, we selected Louis Mazzei to replace Bill Gilbert on the board of directors. Vincent Mazzei was appointed Grand Exalted Poobah of the VIC-20 (GEP of VIC).

Dick reported on a phone conversation with Del Contreras, former FCUG technician. Del is 91 but still going strong. He does a little PC repair work, mainly for family, and continues his genealogy research (Del has traced his ancestry to Spanish conquistadores who came into New Mexico in the 1500s). Dick will be visiting Del in the near future to pick up some equipment that Del no longer wants.

Robert showed us a couple of early cartridges, Capture II, which enables freezing/backing up protected programs, and Turbo 50, a disk speed-up device. He also reported that Jim Brain can now distribute JiffyDOS for the Plus/4 and VIC-20.

Louis reported that Jim Drew, whom we met at CommVEx in July, is starting a website, www.cbmstuff.com, to sell some of his old Commodore stuff, as well as equipment he has developed. The site address is reserved but not yet operational. Louis also said he has an extra Servant 128 chip if anyone in the club needs one.

The meeting ended just before 3, but it took Robert until nearly 4 to get all his gear repacked into the car. During that time, member Randy Smith visited to pick up a C128D keyboard that Robert sold him. He spoke at length with Roger and briefly with Louis. During his brief visit, he discussed GEOS and ram expansion, tweaking Roger's curiosity about Wheels, the newer operating system which can use GEOS applications. Roger had never seen Wheels in operation. Perhaps a Wheels presentation is in order.

FEBRUARY 2013 REPORT

-by Robert Bernardo

For the February meeting, I arrived on-time, followed by Louis and his son Vincent a few minutes later. Dick Estel was absent for this meeting, but Roger and Brad did come in. I set up the tables with the SX-64 on one and my display of C64 video digitizers on the other. The digitizers included ComputerEyes from 1984, the Print Technik Video-Digitizer from 1985, Video Byte II (including Super Explode V5.0) from 1989, and the Scantronik Video Digitizer from 1990. I also brought my broken VIC-20 for Louis to look over.

As usual, while I set up everything Roger, Brad, and Louis engaged I technology-related small talk. Finally, everything was set up, and we sat down to order our food.

As we waited for our food, I showed the SX-64 amateur commercial v1 and v2 that was posted to Blip.tv and to YouTube. In January we filmed parts of it at the user group meeting, at member Alfredo's house, and at my parents' house. I edited it all together, over 27 minutes of footage reduced to 59 seconds, a process which took over 8 hours of work. That was just for version 1 of the commercial. Some on-line users wanted a babe in the commercial (in the original, it was a bikini-clad woman diving into a pool). After 3 more hours of editing, I finished version 2 of the commercial with Amiga personality Kiki Stockhammer gyrating during one of her band's concerts, the band being Warp 11, a Star Trek rock-and-roll band.

For lunch I ordered the shrimp burrito and soda, but because it was my birthday, Brad picked up the tab! Also for dessert, Louis had brought a C= decorated chocolate cake in honor of my birthday. Yum! Thanks to

everybody for making the meeting a special occasion.

After the lunch, we got down to business, old and new business, that is. I reported that only one more payment was due for the July 27-28 CommVEx and that surprisingly the venue, the Las Vegas Club Hotel, was not accepting any room reservations for the date. We surmised that the LVC Hotel was going through remodeling, and that was why no one could book any accommodations. I had to advise the members to look at other nearby hotels near the LVC.

Louis showed the many 6502 CPU chips that he got from Bulgaria and the many 6560 VIC-I chips he got from China. We talked about how there was so much interest in these chips from those on the Denial VIC-20 forum and how that interest just petered away. So, now we have lots of chips for any VIC-20/PET repairs for the club.

We opened up my broken VIC-20 and found that the 6502 and 6560 chips were soldered to the board. Darn! O.K., I'll have to give the VIC to Ray Carlsen so he could install sockets for both chips. Then we could replace one or both chips, the chip(s) being probable cause why my VIC wasn't working.

Then we started two concurrent presentations. Louis demonstrated the method of rebuilding an Atari joystick with new parts from a supplier. I demonstrated, or should I say tried to demonstrate, the use of the various video digitizers listed above. Louis' presentation went without a hitch, showing the method of how to make an Atari joystick as good as new. My presentation did not go as well.

First, I tried the ComputerEyes digitizer. I hooked in my Canon videocamera to the digitizer. No response, even though I turned

the two knobs on the ComputerEyes unit. Then I tried the Print Technik. I was able to digitize one image of Vincent, but then it would not respond to further scanning. Very strange! What was happening?

To my chagrin, I did not bring a gender changer for the RCA cable coming out of the Video Byte, and so, I was not able to demonstrate that one. I went to the Scantronik Video Digitizer, the most sophisticated of the bunch because it used three separate scans -- one red, one green, and one blue -- in order to form one complete color image. I held the green transparency in front of the videocamera lens and tried to do a scan of Vincent. Nothing! Just some dashed lines on the screen. Heck! I tried the process again with the red transparency. Again the same result! What was happening?

The digitizers wouldn't work or would work slightly but unreliably. Three different digitizers... They couldn't all be bad. Oh-oh, wait... I remembered. The SX-64 user port is different than a C64/128 user port. It had different voltages (as Ray Carlsen explained to me later on, the SX-64 carried 9 volts AC grounded on one of the user port pins, which is an undocumented CBM error. To make it compatible, you'd have to cut a

trace on the board, disconnecting the 9 volts to that pin.) So, that's why the digitizers were responding in such a flaky manner.

I explained to the members why the digitizers weren't working, and I gave my apologies. I should have brought a regular C64 or C128. They understood that not all goes as planned in a meeting. I just hoped that the SX-64 did not damage the digitizers by feeding them the wrong voltage.

The meeting ended way past our official end time, but that was as usual. Before I started

disassembling all the gear and packing it away, I reminded the members about the date of our March meeting. I also took home the rest of the chocolate birthday cake; it was too much for the club members to finish at the meeting, and it was too much for me to finish alone at home. However, my middle school students loved it the next day.



VIVA AMIGA UPDATE!

(From 2010 to 2012, Zach Weddington, film-maker and producer, filmed interviews and more for his movie entitled, "Viva Amiga!", a film about Commodore Business Machines and the Amiga computer. He interviewed various users, behind-the-scenes newsmakers, and engineers, like R.J. Mical and Bil Herd. Now he is editing the film and gives the latest update below.)

From: Zach Weddington (via Facebook)
Date: Saturday, Dec. 15, and Sunday, Dec. 16

My film is not about the Amiga, it IS the Amiga. More - It's all the glory and the pain, the real story with the people who were actually there. After it's done next year, it will always be around to remind people that periods in history should not be forgotten; there are winners and losers, and ultimately it's what we lose that matters the most to remember.

And just to be clear, the whole film is being edited at once, according to content. That will be finished this year as promised. Then I will polish a section to the level of a final cut and display it. Then get feedback from you all. Then complete the polishing until completion throughout the rest of 2013.

Thanks for your patience as I slug through the most visually uninteresting, least cool-updateable part of the film-making process. There's a light at the end of the tunnel! Coming in the late spring -- a finished chapter with visuals and sound and graphics. Keeping my eye on the big picture here. And Robert Bernardo said some pretty damned insightful things about Commodore and what it means to love a computer. Just finished editing his interview.



SOURCING NEW RIBBONS FOR OLD COMPUTERS

-by Paul Quirk

There was nothing quite like a document printed from an 9-pin dot-matrix printer -- the kind that would be connected to an 8-bit computer. [There was] no attempt at hiding the blocky nature of the characters. We lived in a world of visible pixels, and we were proud to show them. Sometimes, I'd leave the tractor feed sides on the paper just for that added touch of mechanical technology.

In these days of dirt cheap, razor sharp inkjet printers, it's fun and whimsical to send correspondence printed off one of these ancient but reliable printers. Problem is, getting replacement ribbon cartridges is becoming increasingly difficult, expensive, if not downright impossible, and re-inking can only go so far.

Dot-matrix printers are here to stay, except these days they're marketed as "impact" printers. Multi-part forms, the kind used in shipping where you have a white, red, and yellow copy, ensures the business need for an impact printer; laser and inkjet can't do multi-part forms. They're just not as common as they once were, so these days, industry makes ribbon cartridges for dozens instead of thousands of different makes. My first printer ever was an MPS 802 connected to my Commodore 64. When I got a Commodore Amiga system, I sold the MPS 802 [and bought] an Epson LX-810, as the MPS 802 didn't work with the Amiga. [Comparing the MPS 802 and] the LX-810 model printer, [I noticed] that the printer ribbon cartridges looked very similar; but, as is the way with printer technology, there were slight differences in the ribbon cartridge design that prohibits interchanging the two.

I recently acquired an MPS 802 printer. It occurred to me that, while there may have been differences in the printer cartridge design, I assumed that the ribbons themselves would be of standard dimensions. It would have been cheap and easy enough for manufacturers to stamp out their own plastic ribbon cartridge cases en masse, but they likely bought the ribbons from a common source, as is typical in manufacturing. I checked. The dimensions of the ribbon in the cartridge of the MPS 802 are pretty much identical to that in the

Epson LX-810 cartridge (and probably others).

To test, I took an old Epson LX-810 cartridge that still works but is slightly faded, and removed it from that cartridge. Next, I carefully pried the top off the MPS 802 cartridge, and removed that ribbon. Then I wound the ribbon from the LX-810 cartridge around the spools, snapped the lid back into place, and wound the ribbon back in. The result? Success.

This is good news, because Epson still sells a printer that takes the same ribbon as my old LX-810; it's the LX-300 printer. Ribbons for this printer are available at Staples for a reasonable \$13 or so. I think I'll buy a brand new Epson printer cartridge to cannibalize for my MPS 802 now, but I probably should wear latex gloves [next] time.



AN INTERVIEW WITH JIM SUMMERS

(Commodore PET/64 game creator)

-by Mr. Nop

JS: First, a little background about myself. When I was thirteen years old, a student in junior high school, I arrived at school one morning to find these large bulky machines in our classroom labeled "PET Computer".

In the days where an Atari 2600 or Colecovision was all we knew, these PETs were viewed with some mystery and intrigue. I found them somewhat intimidating with all of the keyboard characters and the mysterious reverse field key. Over the following semester with the help of a dedicated teacher we learned BASIC programming and the basics of the GOSUB, REM, PEEK/POKE and DIM statements.

In those days games were stored on cassette and we had to use the wall mounted clock to 'time' the cassette in order to fast forward the tape to xx number of seconds as per the times written on the tape case card. This meant rewinding the cassette each time we wanted a different game. I enjoyed breaking out of the games and looking through the lines of code in order to see how each game worked. At the time my father was a teacher at another elementary school and when school ended for the season we visited the school to play on the PETs as my father packed up the classroom for the year. A very kind principal observed these two young boys playing on the PET and asked us, "How would you boys like to take these home for the summer?". We were grinning from ear to ear. Many of the summer nights were spent in our basement programming games in BASIC.

In these days games arrived in the classroom strictly through hand-to-hand copying of tapes and in this month alone I've discovered games that I'd never seen before on the PET such as Defender and Frogger. It was a different era, one where friendships were made through going over to another student's house to LOAD and SAVE games on tape. Today you can download a game located in an overseas country without ever leaving your bedroom.

A few games peeked my curiosity as they contained only one line of code, a SYS statement. I wondered where the rest of the code was and why I couldn't list it. These games seemed to be of better quality than the BASIC games, ran much faster and often imitated commercial arcade games.

One day in 1982, a game arrived in our classroom titled Slime! It was written in machine language and the player's mission was to fight off ever-growing green slime. The game was highly addictive and students were wondering if any other games existed written by this Jim Summers fellow who also happened to live in Ontario. You can imagine when Star Spores made its debut, we were gathered around in the classroom watching one another play. Each level was different and many kids were blown away by the creativity of it.

Fast forward 30 years to Christmas of 2012. My brother and I were reminiscing about the 'old 8-bit days' and he suggested I should write a game for the PET. At first I laughed it off, thinking that there could be no more than perhaps four people who'd ever see it. Through visiting forums and websites dedicated to the PET, I learned that it is still very much alive around the world. I dusted off the old compiler and set about coding a game in 6502. In my down time I looked through old messages and found people asking where they could find Slime and Star Spores. This brought me back to thinking about you, and remembered that my brother once mentioned contacting you to find out if you had the source code to Star Spores in order to try to port it over to the C64 (which also maintains a large fan base to this day).

I believe that the Commodore era was one of the greatest times for a teenager to experience. It allowed us to meet new people face to face not through an internet

browser. It resulted in many nights of young teenagers in their basements hacking away at code. I look at the thousands of C64 games in existence and often wonder if the same nights I spent on my C64 if somewhere in Europe someone else was doing the same.

Q: So umm, what have you been up to for the last, oh, 30 years?

A: I wrote the games for the PET and C64 during my last years of high school. After I graduated in 1984, I went to the University of Waterloo for the computer science program. I finished my undergrad, then spent two more years getting a Master's degree, also at University of Waterloo. While I was doing my undergrad, I decided I liked Waterloo, and I have lived there ever since.

After I graduated in 1991, I worked for a University spin-off called Waterloo Scientific. The company manufactured test equipment for the semi-conductor industry, so I worked with lasers and X-rays for a while. I worked at that company for about 10 years, but eventually the company was sold and shut down, and all the jobs were transferred to Britain.

After that, I worked for another local Waterloo company named Sandvine, which makes network equipment that analyzes network traffic and can apply policies for handling traffic of different types. I was working there when there was a big debate over network neutrality, and it was interesting to have inside knowledge of what was considered an evil company.

I was laid off from my Sandvine job about 5 years ago, spent a while looking for another job, and ended up going back to the University of Waterloo again. I have been

working on a PhD for the last 4 years, researching how to make video servers faster.

I have been married for about 15 years.

I didn't write any more games after I entered University; since I became a professional programmer, I stopped doing it as a hobby. But my jobs have involved embedded systems and hardware, which requires the same sort of efficient programming practices as needed for games.

Q: When the PET computer first arrived in schools, we were just beginning to learn BASIC. I was wondering when you learned 6502, was it on the PET or did you learn it from another platform? As an example, Space Invaders surely had to have been written by someone who had prior 6502 knowledge as it was one of the first PET games to be written shortly after the PET was introduced.

A: I learned 6502 by writing games on the PET. The first computer I used was an Ohio Scientific computer that also used a 6502. My father was a high school teacher and he would bring the computer home on the weekend. My brother and I begged for our own computer, and my parents gave us a PET for Christmas. I think it cost a rather shocking \$1300, for the model with 16 KB of memory.

I wrote a few programs in BASIC first, of course. I wrote a program that would solve Rubik's cubes, I wrote a text-based stock trading game, and I wrote a version of the game "Breakout" in BASIC. I switched to assembly language after that. The Space Invaders game was my motivation; I wanted to write a game that good.

I learned 6502 from a technical reference that described the hardware and listed the

commands. I didn't have any formal programming training at the time, I figured it all out on my own by trial and error.

Q: How were Star Spores and Slime written, in a machine code monitor or through an assembler?

I wrote 3 games for the PET. Astro-Rescue, Slime and Star Spores, in that order. All of them were written using a machine code monitor, which was a bit of a pain, but I didn't know any better. I used a piece of paper as my symbol table to write down the starting addresses of various routines and variables. I spaced my routines out in memory to leave room to add to the code; but when there wasn't enough room, I would jump to code at a new location and then back. Fortunately, there wasn't a huge amount of code for those games, or my primitive programming methodology wouldn't have worked.

I didn't find debugging and testing the games to be too hard with the monitor. I wired-up a reset switch, and I tried to keep the code working as I added new features and refined it.

My lack of knowledge of programming techniques was more of an obstacle than using a monitor. My first game, Astro-Rescue, was pretty primitive since I couldn't figure out how to get multiple things moving on the screen at once. In that game, when you fire the weapon, everything else stops moving. I refined my technique for Slime, where I basically reinvented the polling loop.

For Star Spores, I found an algorithm for drawing straight lines from a magazine article. It was an interesting experience to take programming classes after writing these games and find out the formal techniques

that I had already figured out in practice.

It would have been really nice to have a symbolic assembler, not that I knew what they were at the time, and I probably couldn't have afforded to buy one. I would have loved to use a C compiler.

Q: One of the things that appealed to us about Slime and Star Spores were two options that were not often found in 6502 PET games. These were the option for one or two players and being able to enter your initials for a high score. These options created an atmosphere of competition between players. Star Spores in particular was like playing a completely different game on every level.

Could you tell us where the idea for Slime and Star Spores originated from? Where did you come up with the ideas for each of the Star Spores levels (example: shooting an alien on his descent will pause him, shooting him on his ascent will destroy him)? Were you an avid video game player?

A: Slime was a game I designed. I think the main inspirations were Centipede, and maybe Robotron (I don't remember when that game came out). I liked games where things get really complicated, making it hard to think. When the growth in slime gets out of hand, a hundred spores stream out at you, and that annoying '*' chases after you, I think the game gets something like Robotron.

Star Spores was a copy of a game my friend, David Shadoff, wrote for the TRS-80. It is loosely based on Galaga, which has similar waves of different opponents. The style of the graphics, using quarter-character blocks, was common for TRS-80 games. Some of the opponents in those games were copies of my friend's, some I came up with myself.

At this point, I don't really remember my specific inspirations for all the characters, but I was a keen observer of arcade games at the time. I played my share of arcade games (but I tended to spend money on books, not games). I had an early video game system, the Fairchild Channel F, and I also had an Atari 2600, but I spent most of my time either playing or writing games on my computer. My school eventually got some Apple II computers, so I had a bunch of Apple games; and I was exposed to TRS-80 games from my friend. All of these were inspirations for writing games.

Q: In looking at Slime, there seems to be a certain level of quality that you were trying to achieve. I'm referring to things such as the slime effect on the title page and the transition effect between players where the screen fills up with green glob, an option for two players and the high score feature as I've already mentioned. You raised the bar for PET games that's for certain. What was your intention in creating these games, was it to release them commercially, for your own programming pleasure or to create something that would be an enjoyment for others to play?

I wrote the games mostly so I would have good games to play. I was also in sort of a competition with my friend to see who could write the better games. I tried to use the best programming practices of the time. I created fancy splash screens, high score lists, and allowed two players; just like the arcade games and commercial computer games of the time.

I never really considered selling the games. There wasn't much of a market for commercial programs on the PET, and I didn't try to contact any of the companies at the time. I found the games were more useful for trading. I gave me something to

upload to a BBS so I could download other games in return. It is unfortunate that the PET wasn't very popular, but I was writing games mostly for myself.

I wrote my Commodore 64 game with the idea that it would be sold. I made an arrangement with the owner of a local computer store to lend me a C64 floppy drive for development purposes. Unfortunately, the deal didn't work out. I gave a copy of the game to my cousin, who then started giving away copies to others. When the owner of the store saw someone playing my game in his store, he promptly ended the arrangement and asked for the floppy drive back. I sometimes wonder how things would have worked out if I were a bit smarter about handing out a copy of the game; but C64 games at the time were already starting to be better than anything a single person could write.

I also wrote some software for the Apple II, which was my first paying job. I ported an educational game from the C64 to the Apple, and earned \$200 for my efforts.

Q: Did you ever receive any correspondence by publishing your address in these games? I've always been amazed at how programs traveled from city to city solely via cassette tape. Our school teacher would receive new games by traveling out of town or through postal mail. Do you remember how you distributed your games?

A: I have been contacted by a handful of people over the years, so I am somewhat glad I put my name and address in the games. I'm a bit embarrassed to admit I didn't respond to the messages. I knew about the simulators out there, and thought about getting my games working again; but I never got around to it. However, I was really pleased a year ago or

so when I decided to do some research on the emulators again. I easily found my C64 game, but the PET games were more challenging to find. It seems kind of magical that my games have been ported, and excellent emulators have been written, all with no effort on my part. Open Source software is great, and I wonder if there is some way I indicate that my games are freely distributable.

That being said, I didn't find a copy of Star Spores online; just Astro-Rescue and Slime. I have Star Spores on a cassette, but my PET is dead after all these years, and I haven't made an effort to find out how to transfer software from cassette. I might have a copy on a C64 floppy, I need to do a bit of searching for that.

I didn't make any special effort to distribute my games. I just uploaded to BBS's and gave the occasional copy away. It's amazing how it got saved and transferred to the internet after 30 years!

[Ed: We were able to find a copy of Star Spores online, and it is at <http://www.commodore.ca/forum/viewtopic.php?f=1&t=8017>]

Q: What did your friends think of you after these games were released? I would imagine you were probably the most popular kid in high school at the time?

A: Unfortunately, I got almost no fame from these games. None of my friends had a PET, and my school had Apple II computers, which had more impressive games. My school eventually got some PET computers, but my games were old news by then.

Q: Having created a few games of my own in machine language, I can tell you that I have never found them challenging to play.

Knowing the logic behind how the enemy moves or when he will fire upon you seems to take away some of the challenge. I've always believed that the true test of writing a game is whether it can challenge the author. Were you challenged by your own games when playing them?

A: I was definitely challenged by my games, the main reason I wrote them was to play them. I do wonder how my high scores measure up though. I don't think anyone will beat my Astro-Rescue high score; it was a difficult game and I barely remember how to play it. Slime was my favourite game, and I hope my high score is competitive in that game. I probably had some advantages from having designed the games, but getting good at arcade-style action games is mostly about practice, and I got plenty of practice while testing them.

Q: Many programmers seem to go from one platform to another. You eventually moved onto the Commodore 64 where you wrote a game titled Alien Brood which was the C64 version of PET Star Spores. Alien Brood was released in 1983, just a year after the C64 was introduced. You wasted no time in learning the internal workings of the C64. Could you give us some details on Alien Brood?

A: I didn't port the PET version of Star Spores to the C64, I wrote it again from scratch. I don't think I really had a choice, as I recall the memory layout of the C64 was different than the PET; and since I couldn't relocate my code or really change it much, a direct port wasn't an option. I used hardware sprites on the C64 for the characters, and the quarter-character graphics was unnecessary for the C64. Also, the C64 had a sound chip, so my sound routines from the PET version weren't of much use either.

I only used 8 sprites for the C64 version; the space ship at the bottom and the missiles are done with regular graphics. I used the sprite collision detection to determine when the characters were hit. I didn't know about the tricks for using more than 8 sprites on the C64.

I used a machine language monitor to write the C64 games. I never owned a VIC 20, the hardware didn't impress me. I went from a PET to the C64. I also owned an Apple II clone at one point.

Part of the reason I could learn new platforms quickly was that you could actually get documentation about all the hardware in the computers. The technical reference for the C64 had complete details about all the hardware, so it was just a matter of deciding how to use the information. I had a great reference manual for the PET; it even included schematics. That led to one of the biggest thrills I had with my PET. At the time, it was about \$300 more for the 32 KB version of the PET, and Commodore was known to drill holes in the motherboard to prevent people from adding memory to the 16 KB model. When I examined my PET closely, I saw that all the memory slots were populated. Checking the schematic I had, I determined that I could change a jumper to get 32 KB of memory. My friend and I cut a jumper, soldered in a new one, and my PET instantly had 32 KB for free! My mother still mentions she was shocked that I took a soldering iron to a very expensive computer.

Q: After releasing these three games you seemed to disappear from the game radar. Were there any other games that were released that we're overlooking? I'm told that you may also have written games for the Apple II.

A: Nope. My game writing career was over when I started University. Once fight games and first-person shooters came out, it seemed like way too much work to write a commercial-quality game.

Q: In attempting to find you, I spoke with your brother who reminded me of my own brother with whom I spent many nights programming. He sounded like he also knew a lot about machine language. Does the love of coding run in your family?

A: The love of coding doesn't really run in my family. My brother is more interested in the hardware, and didn't write significant programs. My sister went into accounting, and is now a CFO. My father was a teacher and my mother a nurse; but they are avid do-it-yourselfers, which is probably why I thought I could write my own games.

Q: Even though the PET was released in US and Canada it seems that a lot of software for the PET originated from Ontario, particularly Waterloo. Do you have any thoughts on why this was?

A: I don't know why there would be a Waterloo connection. I suspect that part of the Ontario popularity of the PET was due to the Toronto computer store (I think it was called Batteries Included?). I was interested to see there was a lab with SuperPets in it when I started at Waterloo, but unfortunately, I never took a class that used those machines. I'm guessing there were a few fans of the PET at University of Waterloo, which may be why software originated here.

Q: One of the things that has always bothered me over the years is Space Invaders. Someone went through a lot of effort to write that game, a clone of the real arcade game and yet never gave themselves

any credit. There is no reference as to who wrote it. Was this you Jim and if not, do you know have any thoughts on where it might have originated?

A: I don't know who wrote Space Invaders; but it was really head and shoulders above the other PET games of the time. I'd love to know the story behind it as well.

Q: One of my idols on the C64 was Jim Butterfield. While I found some of his articles confusing at first, in later years I was able to appreciate just how much he knew about the 6502. Did you ever meet Jim, did you look up to him?

A: I never met Jim Butterfield, but I was impressed by what I read in the Computer magazines at the time. I was really impressed that Science Fiction writers like Orson Scott Card and Jerry Pournelle wrote technical articles about computing.

Q: It seems that it was only yesterday that magazines were publishing games sent in by other programmers that the reader could type in and play. I recall Compute and Compute's Gazette being must-have magazines as a teenager. Today I find that many youths engage in X-Box or Play Station but have no knowledge or desire to learn how to program. How do you feel knowing that almost 30 years after you wrote these games, that people are still requesting them and playing them? Do you think that the 8-bit machine is a dying breed? What would you say to someone interested in learning machine language for the Commodore machines?

A: Computers really are different now than 30 years ago. In the early days, computers seemed to be designed for programming, not for simply running programs. The games were also much simpler, so that it was

possible for a lone teenager to equal the quality of professional games. Once the C64 and the better video game consoles came out; the production quality of games made it too daunting to try to equal.

That being said, there are many game development platforms out there; and huge numbers of Apps and Flash games. There are probably just as many kids inspired to program these days as there ever were; which is to say, not many. The beauty of the old 6502 systems is that they were simple. You didn't need device drivers; you just wrote to hardware registers. Also, machine languages were designed to be used by programmers, not compilers. But with the number of open source programming tools out there; and the wealth of information available from Google Searches, I think there are ways for people to write their own games if they want.

8-bit machines are clearly a dying breed; I don't think you can actually buy one any more. But I think it is worthwhile to learn any machine language, since I think even high-level programs can be written better if the programmer understands how the computer works. I consider the 6502 to be one of the original RISC computers, it certainly has a very small number of registers and operations. There is also an advantage from the simple memory-mapped support chips. Although students always want to use the latest and greatest processors and systems; I think you can learn machine language and computer hardware much better from a PET than a horrifically complicated multi-core x86 processor.

I don't know if there is a port yet; but an iPad and/or Android port of an 8-bit simulator might be a good tool for encouraging people to program for 8-bit machines. Some of the Apps on tablets seem

to be closer in spirit to those old 8-bit games than typical modern PC games, where a lot more effort is applied to the graphics than the action in a game.

Q: And finally, do you have anything you'd like to close with....

A: I'd like to thank the community that has kept 8-bit software on life support. Without all the work writing emulators and transferring programs from obsolete storage devices, this software would die along with the hardware that ran it. In my case, the games were just a hobby of mine as a teenager, and I never put much effort into preserving them. But I think it is really great that through the efforts of others, my software lives; and I can show off my 30-year old game to my fellow students who weren't even alive when I wrote them.

[I would like to thank Mr. Summers for taking the time to do this interview. His PET games are still sought after by PET owners to this day.]

MEMORY LANE

-by Dick Estel

Introduction

This will be a limited series of articles saluting some of our past members, people who have made a significant contribution to the club. Our more recent members did not have the pleasure of knowing these men and women, many of whom have passed on. However, they made a lasting impression on the club and the author.

Since the subjects are mostly not available for questioning, there will be quite a few times when I will have to say something like, "I believe," or "to the best of my recollection." Questions and comments to our web address, info@dickestel.com, are welcome.

SANDY & INGRID DIPPOLETT

Salvador "Sandy" Dippolett joined the club a year or two after I did, when we were still meeting at the Fresno Adult School . It was immediately apparent that he was a man of broad knowledge and above average intelligence. He was always there with wise council when we had difficult issues to deal with.

Sandy had been involved in various other organizations, so had experience with matters such as obtaining non-profit status, finding meeting locations, and recruiting members.

He was an optometrist by profession, but had spent a part of his life working for the state health agency, reviewing Medi-Cal claims. He was interested in photography, and during his retirement, took up painting, an aspect of his life that we did not learn about until after his death. When Ingrid invited club officials to come and pick up

his equipment, she gave each of us one of his paintings. I chose one showing an old barn, a favorite photographic subject of mine.

Coincidentally, I had met this wife long before I joined the club. She was a social worker at the Fresno County Welfare Department when I was an eligibility worker, and we had a few clients in common over the years. She had retired by the time I met Sandy .

At some point the club decided to hold a picnic and invite members and their families. Sandy and Ingrid generously offered the use of their large patio and back yard. They had a ten acre lot east of the Fresno-Clovis metro area, with a sweeping view of fields and meadows and the Sierra foothills beyond. After moving there, they had purchased another ten acres to the east, ensuring that their view remained unobstructed. The property was further enhanced by a duck pond, a guest house/workshop built in the classic "old barn" shape, a huge lawn, and an extensive cactus garden (they were members of the local cactus society).

The Dippoletts provided soft drinks, members brought food for a potluck, and we were able to enjoy this location for our annual picnics for a number of years. Sandy passed away in 2001, much too young at age 76, and Ingrid left us only a year or two later. A photo of Sandy is on the FCUG website at

<http://www.dickestel.com/images/fcug013.jpg>

and there's one of Ingrid at a picnic at

<http://www.dickestel.com/images/fcug0053.jpg>

FCUG FINANCIAL REPORT - 2012

-by Dick Estel, Treasurer

Checking IN

Starting Balance 1/1/12 1,592.40

Donations to FCUG

Donations for CommVEx

Dues 48.00

VCR & DVD Sales 0.00

Other Sales 0.00

Transfer from cash 0.00

Interest 0.64

Total Checks IN 1,641.04

Checking OUT

Transfer to Savings 5.00

Dinner/Picnic

Newsletter

Bank Fees 26.90

Charitable donations 50.00

Motel for guests

Total Checks OUT \$81.90

Checking Balance \$1,559.14

Cash IN

Starting Balance 1/1/12 \$83.49

Dues \$84.00

Raffle \$0.00

VCR & DVD Sales \$0.00

Other Sales \$19.55

Donations \$1.00

Total Cash IN \$188.04

Cash Out

Raffle

Transfer to checking

Dues

Misc sales

Club dinner 91.26

Other 0.00

Total Cash Out 91.26

Cash Balance 96.78

Savings 5.00

Total Assets 1,660.92

When we moved our checking account to the Employees Educational Credit Union, we were required to include a savings account with a minimum of \$5. We do not expect to add to or withdraw from this account. Over the last two years our total assets have declined very slightly, from \$1697 to \$1660, but we still have adequate funds to operate. In the past, income from equipment sales went into the club treasury; however, in the last few years most such sales have been used for CommVEx.

Bank Fees: These fees were imposed by our former bank, after several years of free checking, and were the reason we changed banks.