The Interface

"Taking 8-Bits Into The 21st Century"

Volume 42 Number 5
July/August 2024

Happy Independence Day To All!

Commodore and FCUG celebrate the 248th birthday of the best nation on earth!

In This Issue:

Newsletter of the Fresno Commodore User Group – Fresno, California
www.dickestel.com/fcug.htm

THE EDITOR'S GODZILLA

-Fan fiction by Lenard R. Roach

THE SACRIFICE OF A COMMODORE COMPUTER (Part One)

“I'm gonna kill you you son of a b****!” yelled the man who stood opposite me. He was covered in his own blood from a broken nose that I had given him.

There I stood with no weapon on me. I knew that he was going to put everything into his next charge, and though we were of equal size proportionately, my old body was not going to allow another assault. I needed a weapon – any weapon – to help even the odds, and the only thing within arm's reach was my Commodore SX64.

But perhaps I should start this tale from the beginning …

While I was working at the Malconey's Pizzeria back in 2022, I was telling the younger members of the staff about my Commodore computer collection that I had amassed over the years. Nobody at the store had no idea what a Commodore was, but everybody did a quick Google search on their several cellphones and found an image of the machine. They only saw the C64 version on-screen but did not know about the other models of Commodore computers that were released during the 1980s. I told them about the Commodore 128, the PET, the VIC-20, the Commodore 16, the Commodore Plus 4, and on and on. To these young people, the Commodore computer was a piece of history while I actually got to live through that era. A couple of the gang were skeptical about my claims and wanted solid proof. After I had a quick discussion with the evening manager, he agreed to let me to bring my SX64 to work and to allow the staff to handle and even use the Commodore computer. I chose a usually slow day, Tuesday, to bring the SX64 to work.

When the day finally arrived, I had my SX64, two joysticks, and some selected software loaded up in my SUV, and I headed off to work the evening shift at Malconey's. A short drive from Kansas City to Angel Valley and I was in the parking lot of the North Angel Valley Shopping Center where the pizzeria was nestled into the brick work of the strip mall. After unloading all the Commodore equipment from the SUV, I tried my best to lug all of the equipment into the store in one trip without dropping anything onto the pavement.

That's when it happened.

Business at Bridgette's Ice Cream and Malt Shoppe next door to the pizzeria was booming as the ice cream season was opening up. Boys with dates and women with children were all crowded around the shoppe trying to eat their treats and enjoy the shade on this warm spring day.

Then a small blue 1995 Plymouth pulled up in front of the ice cream store. Funny. It parked horizontal to the front of the store and not in a parking space like most people did. A stocky man of about fifty years of age came out of the car and

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headed towards the ice cream store as I was passing behind the Plymouth with my Commodore gear. We brushed against each other in passing, to which I offered my apologies to the gentlemen. He said nothing but continued a determined stride towards the ice cream shoppe. Thinking no more of it, I headed to the pizzeria. As I stepped on the curb, I heard an ear-piercing scream that instantly caught my attention.

I looked towards the direction of the scream, and standing up with horror on her face was a woman looking directly at the Plymouth. I glanced where she was looking, and there was the stocky man with two young boys about five years old each under his arms, rushing back to the car and trying desperately to open the back door with the two boys in tow.

“Stop him!” came the shout from the woman. “He's got my babies!”

I set down my Commodore equipment and approached the stocky man as fast as I could. I grabbed his shoulder, which turned his attention off his car and onto me.

“What's the big idea, bub?” I asked.

He looked at me with a wild look in his eye, a look like a man possessed. He gritted his teeth as he addressed me.

“This is none of your d*** business,” he growled. Then still with his hands full, he turned his attention back to opening the door. I spun him around with a little more force to make him face me.

“I'm making it my business,” I said with a little more command in my voice. “What do you want with those boys?”

“You son of a b****!” he yelled. He dropped the boys who fell with a thud on the pavement. They looked at us totally frozen at the spectacle that was unfolding before them. The stocky man moved quickly, and I was unprepared. He landed a right cross on my chin which sent me bouncing off the trunk of the Plymouth and onto the pavement.

While I was composing myself, the stocky man again turned his attention to the boys that were on the ground. As he tried to pick them up, they began to kick and scream, calling for mommy. This didn't bode well. There was no time to call 911. I had to do something and fast.

I got back to my feet and lunged at the stocky man, forcing him drop the boys. I got him into something of a pretzel hold and kept him at bay while some of the women under the ice cream store's canopy came, rapidly scooped up the boys, and got them to safety. With the kids out of the way, there was room to maneuver.

Even though I was taught by my dad as a young boy the elementary rules of boxing, I had used those skills since back in my high school days. Now I was an old man in my early sixties while my opponent was at least ten years younger than I and ten years stronger. He broke my pretzel hold and made a swing for my jaw again. Blood was already running out of my mouth from his last sucker punch, and I wasn't going to let him get another shot. Putting my arms up to protect my head, the man's blow bounced of my forearm which opened him up for a jab to the nose. I gave it my all and connected, breaking his nose on contact. Blood poured out his nose and onto his jaw and shirt, but he wasn't deterred. He did a body grab on me which pushed me back into his car. Pinned against the Plymouth, I could do little except push back. Then I remembered a move my brother taught me.

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With my hands cupped, I grabbed the man by the back of his head and thrusted his head downward while with all my strength I brought my knee up to connect to his broken nose. He reeled back and fell to the pavement. He grabbed his head while trying to rise. I knew I wasn't going to beat the guy in a fair fight. He was too young and had more stamina than I had. Even after thirty seconds to a minute of combat, I was wearing out, and he was just getting started. I needed to even the odds. I glanced back and saw my SX64 standing on edge, not too far from the curb. I knew what had to be done, but I wasn't going to like it.

I stepped back just as the monster was getting to his feet, and I grabbed the 25-pound SX64 by the handle. He must have thought that I was running away and started pursuit. Screaming obsenities again, he lunged towards me with his arm cocked back, ready to strike with another massive punch. It was now or never.

Like I possessed the hammer of Thor, holding my SX64 by the handle with both hands, I put all my might into a swing and slammed thecomputer into the head of my assailant. The computer caved in at the middle as the machine came into contact with the stocky man. I could hear the motherboard splinter inside. The keyboard flew off on contact and went sailing across the parking lot. The disk drive came out and also flew to parts unknown. The unit came separated from the handle and also went sailing a short distance as the SX64 bounced off his head. The man fell quickly onto the pavement behind his Plymouth, finally unconscious. I stood there for a second with the handle of my former SX64 in my hands. Then I myself fell on my butt onto the asphalt. I was hurt and exhausted; my jaw ached like I had broken every last tooth in my head, but I was still alive.

Observers of the fight didn't know what to do. They let us lay there for a minute until one of the women patrons who had been watching at the ice cream shoppe came over to check on me. She tried to help me up, but I was too weak and too fat for her to lift. I sat there on the pavement with the pieces of my SX64 scattered everywhere, and I stared one more time at the unconscious gentleman. In the distance I heard the wailing of sirens quickly coming closer.

That was the last thing I remembered.

(CONCLUDED NEXT ISSUE)

MONTHLY MEETING REPORTS

July 2024

-by Robert Bernardo & Dick Estel

It was a hot time in the old town, in fact all over California and much of the USA. In Fresno we had been suffering with highs of 105 to 110 for a week, and July 21 was no exception. However, the a/c inside Panera Bread was working at top efficiency, and the members of the Fresno Commodore User Group kept their cool. Robert Bernardo, Roger Van Pelt, Dave Smith, Bruce Nieman, and Dick Estel were present, and as usual, they enjoyed a wide ranging discussion as they ate lunch before the meeting.

Pre-meeting discussion focused on technology, and when Robert brought up the idea of art deco radios of the 1930's and 40's, everybody

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discussed old console and other tube radios in particular.

Robert had recently returned from one of his wide-ranging journeys, this time to New York and Montreal. In Ticonderoga, NY, he had attended the Star Trek tour, which consisted of all the iconic sets from the original show – the bridge, the engine room, briefing room, sick bay, and more. He had a photo taken with William Shatner, the man he calls "Bill." Robert also had his photo taken in a classic Batmobile, which the man in charge of the Star Trek sets had been replicating for several years.

In the capital of French-speaking Canada, Robert visited McGill University, William Shatner's alma mater. He also visited Shatner's boyhood home. Our spies tell us Robert spoke no French during his visit. [Well, one or two words...]

When the formal meeting got under way, Robert reported that the Pacific Commodore Expo NW (PaCommEx) in Seattle was a big success, and plans were under way for a repeat of the event in 2025. While there, Robert learned that the Living Computer Museum, where the first PaCommEx was held, was now permanently closed.

On October 12, Robert will be participating in a 5-hour Maker Faire at Rocklin (near Sacramento), at the Sierra Community College. We all agreed that Robert would be doing a lot of work for a very short event.

Robert has also locked in the date and made a down payment to the Burbank VFW Hall for the 2025 edition of CLASS, the Commodore LA Super Show.

Some schedule changes in FCUG meetings were discussed and decided. We had changed the date of the September meeting, but the reason for the change was now moot, so we went back to our regular 3rd Sunday date, September 15. Due to schedule conflicts, the annual Club Picnic (Lunch) will take place on the FIRST Sunday of the month, October 6.

Moving to the demo table, Robert had again set up his AmigaOne A1222+, since most members missed the first presentation a few months ago. We started off with the "Spinning Cow" graphic demo, Cow3D. The first time Robert ran this demo at that earlier meeting, he was able to launch six spinning cows, a new record. But records are made to be broken, and this time we blinked in wonder as seven cows whirled about the screen before it locked up on number eight.

To further show the capabilities of the A1222+, he ran more applications, like the classic game, Arkanoid, running under OS 3.1 emulation (the A1222+ natively runs under OS 4.1); a native version of the game, Cannon Fodder; showed a hi-def MP4/H264 clip of the Babylon 5 episode, Severed Dreams, running from DvPlayer; had member Bruce play with the AmiDoom game, easily played MOD and MP3 music, ran the ArtEffect program, ran VICE (VIrtual Commodore Emulator) with its C64 and C128 emulations, and even tried out the Odyssey web browser, though the computer was not logged into the Panera Bread wi-fi.

Finally, we had a fairly short demo on the VIC-20 of some ham radio-related material. Roger had reviewed a number of custom VIC-20 cartridges, former game carts into which custom ROMs had had been installed. In one, the user could take advantage of a list of macros. A single key press would display various stock messages that ham users would typically send back and forth. In all honesty, much of this was beyond the understanding of everyone else, but we commended Roger for his work and his knowledge of this aspect of computing.

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August 2024

-by Robert Bernardo & Dick Estel

For a short while, we were powerless. When Robert had finished setting up and had turned on the computer, nothing happened. He checked his power strip, then another nearby outlet. Nothing. We were occupying an area that is somewhat cut off from the main part of the Panera Bread Restaurant, and since we were paying customers, we never had any issues.

However, another Panera location was known to have shut off some of their outlets, because (presumably) homeless people were occupying tables, plugging in their phones, and overstaying their welcomes without buying anything.

We informed one of the people at the counter that the outlets were not working. She said they should be on and said she would notify the manager. Whether she did this or not, we didn't know; nothing was ever done. We moved to a different, less convenient area and had all the power we needed.

Joining the meeting for this adventure, in addition to Robert, were Dick, Dave, Bruce and a rare visit from young Michael.

Before the official start of the meeting, Robert told us about his visit with Al Jackson, former president of the Clark County (NV) Commodore Computer Club, and big supporter of the Commodore Vegas Expo. Like all of us, Al was aging and trying to figure out what to do with his large amount of Commodore equipment. He made a tiny dent by insisting that Robert take home a SX-64, which needs a keyboard cable before it is usable.

We briefly discussed the permanent closure of some favorite restaurants, especially two buffets that shut down during the Covid pandemic, Sweet Tomatoes and Hometown Buffet. It's believed there are still one Hometown Buffet is still operating but none in the Fresno area.

Robert's request to have a table at the Bay Area Maker Faire (https://makerfaire.com/), set for late October 18-20 in Vallejo, had been accepted. Robert will display some classic Commodore machines, as well as some of the 21st century variations, including the AmigaOne A1222+.

Robert had set up his Ultimate 64 and planned to show several games but discovered he had not brought a joystick. Instead we looked at the opening screens of a number of games and demos, admiring the graphics and music.

Then for the last part of the meeting, Robert showed off the new A600GS, a computer which can run Amiga games and applications but also runs a new desktop called AmiBench. Housed in a small case, the GS has modern ports – HDMI, USB 2.0, Ethernet, and USB 3.0 (for power in) – and two traditional joystick/mouse ports. It also comes with a wi-fi modem, though Robert did not connect it to Panera's wi-fi network.

Robert booted up the system, and there was a terrible scratchy sound accompanying the start-up music. This scratchy sound must have been some kind of bug. By using the included gamepad, Robert navigated the Game/Application screen. All games and applications had huge icons. If the gamepad was cursored to the left, system menus opened up where you could change video, audio, and other preference settings.

Robert showed the AmiBench desktop which looked very pretty, but there was nothing to run from there. Returning to the Game/Application screen, Robert demonstrated the one game that came with the GS – Thunderhell. He started the game, but there was that scratchy sound again.

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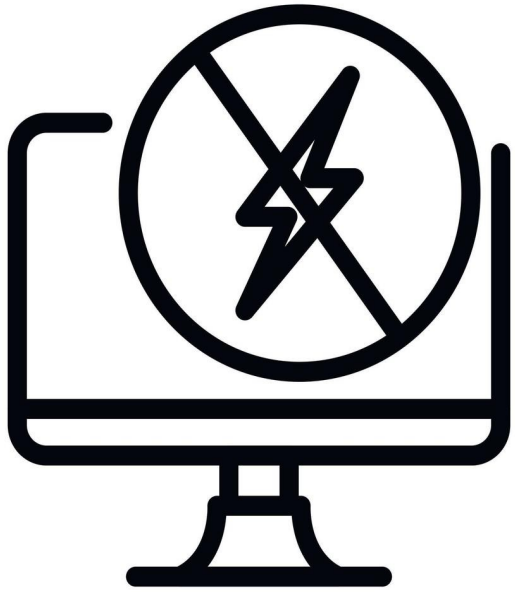
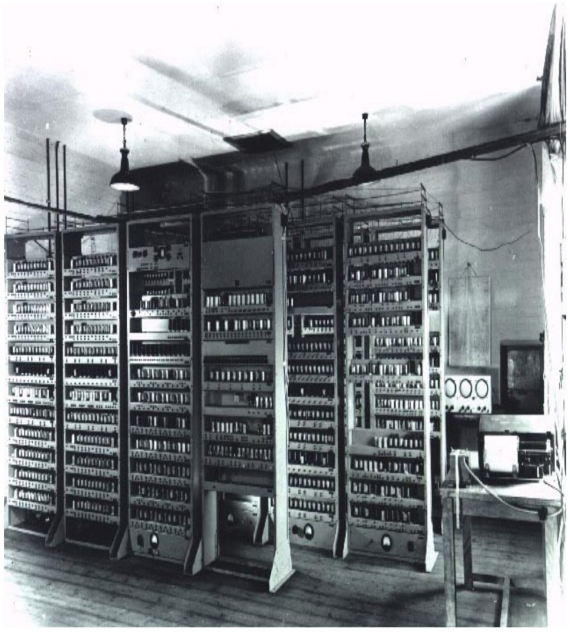
Ack! The entire gaming experience of this outer space shooter was ruined because of that sound which overrode any music or sound effects. Even when Robert exited the game, the scratchy sound would continue a few seconds into the Game/Application screen.

Then Robert tried to install a new game into the GS. He took out a USB stick that had the .adf of Archon, inserted that into the GS, and using the GS's menu prompts, he added the game. However, it wouldn't run! No matter how many times he configured the GS, Archon just wouldn't run. Eventually, Michael gave up in seeing Robert go through this; Michael just took out his tablet and played games on it. The meeting ended with Robert saying that he'd have to read through the GS instruction manual again and look around on the on-line forums for advice on adding and running new apps.



No power? No problem!

75 YEARS AGO



FROM GOOGLE --

The **EDSAC –** Electronic Delay Storage Automatic Computer (pictured above) – was developed at the University of Cambridge after the Second World War, and ran its first successful program on 6 May 1949. EDSAC was the first computer in the world to be fully operational and practical for general use. [EDSAC consumed 11,000 watts of electricity.]

FROM POPULAR MECHANICS, 1949 --

Engineers and mathematicians are like airplane designers. Models in use are already long outmoded by those on the drawing boards. Where a calculator like the ENIAC today is equipped with 18,000 vacuum tubes and weighs 30 tons, computers in the future may have only 1000 vacuum tubes and perhaps weigh only 1 1/2 tons.

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Though never completely satisfied with performance, scientists get a happy gleam in their eyes when they contemplate the high-speed electronic calculating machines of today and the future.

One of them puts it this way: “Just one of these machines will do in a few hours what a human mathematician couldn’t do with a million pencils in a hundred lifetimes.”

PIRACY ON THE COMMODORE 64

-By Guest Contributor Dave Farquhar

One of the indelible memories of owning and using a Commodore 64, at least for me, was the disk drive knocking and rattling loudly as your game loaded. This was the results of deliberately putting errors on the disk to make it difficult to copy. In this blog post, I’ll give you the straight talk on how big of a problem software piracy was on the Commodore C-64, at least in the United States, and what it led to, including the bad, the ugly, and the good. Not that the end justifies the means, but over time it did lead to some good things too.

THE STEREOTYPES

You could buy a C-64 and 1541 disk drive for around $300 and connect it to an old TV. But some people who did that couldn’t afford software afterward.

The stereotype in the 1980s was that all Commodore owners pirated software. I can tell you that isn’t true. I knew two families in the 1980s who had Commodore 64s who didn’t pirate software. There may have been more than that, and probably were. But I can vouch for at least two. If I knew some, so did others. Harsh absolutes are rarely true.

I will also say more people I knew in the 1980s who had Commodores pirated software than didn’t. But I can say the same thing about every other type of computer as well. I write about Commodores because that’s what I knew when this was going on.

THE COST OF SOFTWARE FACTOR

Part of the reason for this came down to simple economics. Commodore computers were among the least expensive on the market. If you shopped carefully, you could get the computer for around $150 and the 1541 disk drive for around $150, connect it to a bedroom tv, and join the computer revolution for around $300. Commodore’s shtick was that you didn’t have to be upper class or even upper middle class to afford one of their computers.

Some people think cheap hardware decreases software piracy. I think it does the opposite. Here’s why.

The problem was even though the computer was really inexpensive, the software frequently wasn’t. Productivity software like a word processor or a spreadsheet frequently was less expensive than similar software for Apple or IBM computers. You could typically find one for a Commodore for around $40, where a comparable piece of software for an IBM or Apple computer

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might cost $100, and a professional grade program might cost $300 or $400.

But games were another story. New releases from top tier publishers like Activision or Electronic Arts frequently cost $40 regardless of the computer platform. Some publishers would discount the Commodore version to $30, but that was unusual.

As software aged, it would drop in price, frequently in $10 increments.

LACK OF AFFORDABLE SOFTWARE

I know in the UK, there was a large market for budget software. Most drug stores and most stores that sold magazines also carried a selection of inexpensive software on cassette. And by inexpensive, I mean it cost one or two pounds. A kid could spend their weekly allowance on new software.

There wasn't a good equivalent to that in the United States. Disks cost more than cassettes, but if UK publishers could turn a profit at 2 pounds, it stands to reason that US publishers could have turned a profit selling disks for $4.

But rather than doing that, the US publishers who imported UK budget titles either sold them for $10, or they bundled several together, sometimes with an older US release, and sold the bundle for $20. This felt like a rip off, and I think it was. They would put four titles on a single floppy, but then still charge $20 even though they only needed a single disk rather than four. When they saved money on media, they didn't pass it on to the consumer.

I knew people who pirated software because software that fit their budget just didn't exist. And I knew people who pirated software because they felt ripped off. They paid $40 for a piece of software that turned out not to be very good, or that was just too difficult to play, and they'd been burned enough times that they didn't want to take a chance.

HOW PEOPLE PIRATED

Commercial software usually had deliberate errors on the disk to make copying impossible. Commodore disk drives came with all of the utilities you needed to connect two drives and copy a disk. But if the disk had errors on it, the included copy program would fail. The program Commodore included worked fine for copying your own data disks, but not for commercial software.

Utilities to copy commercial disks existed, but you had to go underground to find them. The chain stores that sold Commodore software didn't carry those copiers, and the independent software stores usually didn't carry them either.

You could find these copiers advertised in the back pages of computer magazines. You sent $30 or $40 to a post office box somewhere in Washington, California, or Oregon, and a week or two later, an inexpensively produced disk and booklet would show up in the mail.

These copiers usually would copy commercial disks, at least until publishers came up with new and novel schemes to prevent copying.

A fair bit of casual piracy happened this way, with two or more people who owned Commodores splitting the cost of the copier, and then copying each other's software. The more friends you had with Commodore computers, the better this worked.

But there was another option available to the pirate who was willing to dig even deeper.

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MY FIRST PIRATED SOFTWARE

A Commodore modem just like this one, purchased for $20 from a liquidator, led me to vast undiscovered worlds. Those worlds included software pirates.

I was in eighth grade when I first pirated software. I justified it at first by only pirating software that was old and out of print. If I couldn't buy the software, I figured I wasn't hurting anybody.

I copied software from two friends from church who had Commodores. They copied software from a third person, a friend of their parents. Also from church. Now I'm not saying everyone who went to church was a software pirate. It could have been any social setting. I mention this because I know some people will say my friends and I stumbled onto some kind of anti-capitalist commune. And that wasn't the case. It wasn't just radical leftists or anarchists who copied software.

Unlike the software you could buy in stores, this software copied fine with any ordinary disk copier. They had something a little bit faster and fancier than the copier Commodore gave you, but it still didn't copy protected disks.

Nobody knew where the software came from, and they may have been afraid to ask. I figured it out accidentally.

MODEMS AND BULLETIN BOARDS

Modems existed in Commodore days, and they worked in much the same way as modern modems do, except they used copper phone lines rather than cable TV lines or fiber optics. They were also several orders of magnitude slower. But they opened a whole new avenue for meeting people.

I was the first of my friends to get one, a Commodore VICmodem on closeout from COMB Liquidators for $20.

Finding a bulletin board to call usually took some work. But a local computer store or computer users group often ran a bulletin board. The first bulletin board I called was operated by Systems Plus Computers, a Commodore dealer on Watson road in suburban St Louis. For them, the bulletin board was a way to sell products. If I remember right, if you bought the modem from them, they would give you special access on their bulletin board so you could download software. It was all public domain software of course.

I didn't buy the modem from them, so I couldn't download anything. But they did have a listing of other local bulletin boards. I wrote down a few numbers and tried calling them.

Most of those bulletin boards were run by hobbyists. They had enough disposable income to be able to afford an extra phone line and an extra computer to plug into that phone line. They saw it as a way to meet like-minded people and exchange information and software. Some of them were pretty adamant so that you could only upload public domain software, and if you asked for pirate or elite access, they would ban you.

But there were also a large number of bulletin boards that did allow pirate software. Most boards had ratios. In order to download something, you had to upload something. They would let you download more than you uploaded, but you had to give something to get something. That wasn't a

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problem for me. I just uploaded something that I got from one of my friends, and in return, I could download something.

If all you did was transfer files all the time, they called you a leech or a squid. Most bulletin boards didn't want those types of people. They wanted people who were interested in building some community.

I participated in the discussion forums and met a lot of interesting people that way, including the future best man at my wedding, and a guy named Chuck who was an electrical engineer at Emerson Electric. Chuck became a lifelong mentor, and we talked computer security for the last 15 years or so he was alive. He was retired most of those 15 years, but he never stopped learning.

THE ELITES

Commodore disk drives cost as little as $150, which led to disk-based software being more popular in the United States than tape. I think it also contributed to the high cost of software.

I also met some hardcore pirates. Elites, we called them. The modern slang "leet" or "l337" comes directly from that. Elites were the people who were members of the cracking groups who would acquire commercial software, defeat the protection mechanisms, and then upload them to bulletin boards. These were the ultimate sources of the software everyone else pirated.

If I ever knew any of their full names, I've long since forgotten them. We called each other by our first names. I presume they were telling the truth about their first name. They probably didn't have any reason to lie about it.

For many of us, piracy taught us skills that we later put to productive use in corporate IT jobs a decade later. If we hadn't pirated, we wouldn't have learned those things, because there was no one to teach us. And there weren't many other motives for us to learn it on our own either.

I knew several people in the late '80s and early 90s who were members of cracking groups. As far as I know, there was only one bulletin board in the St Louis area that catered exclusively to members of cracking groups. But some of them would call the regular bulletin boards as well.

Most of them got into legal trouble, and even the ones who didn't had some close calls. But it wasn't ever software piracy that got anyone I knew into trouble. It was phone phreaking or hacking.

Unlike today, calling outside your area code cost extra, and you paid by the minute. Calling your teammates was expensive. Calling bulletin boards was also expensive. When minimum wage was $3.35 an hour and calling long distance cost $0.10 per minute, it doesn't take a math genius to see the ratios didn't work.

The long distance companies would set traps for them, send them an enormous bill, and if the bill went unpaid, law enforcement got involved.

They tended to disappear and sometimes never come back. The attitude at the time was that harsh punishments would scare them straight. But usually what ended up happening was they'd

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grow out of it. Once they were old enough to get jobs, that tended to start a domino effect. They'd find some fulfillment in work, find other creative outlets, get involved in a romantic relationship of some kind, eventually get a job that used the skills they had, and become a productive member of society.

I lost track of the guy I knew who got treated the most harshly. I know he spent multiple stints in juvenile detention. He kept coming back, until the time he didn't. The story I heard was he ran away from home and disappeared. I hope he became like the others and found his way to a productive IT career. If he didn't, it's because society failed him.

COMMONALITY IN THEIR STORIES

They all had similar stories. They came from working class families that managed to buy the computer, but couldn't afford much in the way of extras or software. Computer skills came pretty naturally for them. Somewhere along the way, they procured a modem, called a bulletin board, and got recruited into a cracking group. But by the time all that happened, they had more software than anyone could want or need. They cracked software because they enjoyed the challenge as much as anything else. Some of them never used most of the software they pirated, other than an assembler or a disk editor.

Several of them tried to recruit me into their cracking groups. I never joined. Most of them were into other things besides pirating software, including but not necessarily limited to phone phreaking and hacking. They told me how they did it, but I sat on that information for about 20 years. I didn't want to get in the trouble with AT&T. But having talked with actual phone phreakers in the 90s made that part of the Certified Information Systems Security Professional (CISSP) exam really easy for me later in life. The hacking was fairly casual, mostly limited to guessing passwords.

MEETING IN PERSON

I even met a couple of them in person. And it was a little weird when I ran into one of them a few years later, when we were both in college. Of course, the journalist in me wanted to know if he was still cracking software. He said no. He said toward the end of the C-64's time on the market, new software to crack and release was becoming increasingly scarce. And he'd seen one too many people ruin their lives so they could pirate *Grover's Magic Numbers*.

I still remember the intonation in his voice on the title. It was exactly what it sounded like. These were males in their late teens, pirating software aimed at six year olds for kicks because that's all that was left.

He became an expert in Unix, and we crossed paths a few more times when we were in our 20s. He was one of those people you learned something new and important from every time you talked to them. Every time I talk about something Linux-related, I find myself repeating things he said to me decades ago.

COPY PARTIES

Some Commodore piracy happened in plain sight, such as a group of people renting a VFW hall for a Saturday afternoon.

There was another form of piracy at rather large scale: copy parties. These were usually invitation-only events, where someone with connections would procure event space, often at a VFW hall, and they would set up folding tables, people would bring computers and disk drives, and if you couldn't bring equipment, you were expected to bring your collection of disks. People would set up their computers and load up a copier like Fast Hack'em or Maverick, and everyone would hang out and copy disks for the afternoon.

As you can imagine, with 50 people at one of these events running a copy station, in four or five

hours, well over 1,000 illegal copies could change hands. Potentially.

The thing is, it was a social event for a lot of people there. It was a chance to hang out with a bunch of like-minded people that you only got to see a couple of times per year. Chuck, the guy I mentioned earlier, spent most of the time talking to people. He was a fixture at these events, but I honestly don't remember seeing him ever copy anything.

I still remember one copy party where several of us spent most of the time outside playing softball.

SOME PEOPLE NEVER USED THE SOFTWARE

When computer magazines talked about piracy, they would sometimes mention that people would claim to have thousands of pirated software titles and they never use the software. Of course that raised the question of what the point is.

But I believe it. Some people absolutely used the software they pirated. But some people just wanted to have it. It's just a form of collecting. It's no different than having a large collection of digital music or digital movies and having titles you haven't watched or listened to in years, or possibly not at all.

Some of them had enough games that it would take a lifetime to play through them all.

CONFESSIONS OF A PIRATE

In case you haven't gathered through all of this, I did sometimes pirate software. I tended to pirate things that were out of print or not available in the United States. If I liked the title and could get a copy legitimately, I would more often than not. Especially once I had a decent paying job and had some disposable income.

I'll tell you about some other pirates I knew, because I think their stories are more enlightening. Or at least more interesting.

THE PIRATE WHO WENT STRAIGHT

I had a good friend who pirated tons of software when he was in high school. His life growing up was an uphill battle in every way.

But practically the day he turned 18, he got a job at a software store. He had perhaps the largest collection of legitimate boxed commercial software I have ever seen. And this was when all of the software was new. I know he used his employee discount to get all of it, but that still meant he was paying more than half price.

For him, it was largely about the money. Once he could afford software, he started paying for it. Computers provided the way to a better life for him. Eventually he escaped retail, found a job doing corporate IT, and he's had a successful career. When my own IT career went into the toilet in 2005, he was one of a very small number of people who tried to help me.

THE SUBURBAN HOUSEDAD PIRATE

I'll tell you about another casual pirate, because he and I talked about it. I won't mention him by name, but his initials were TV, like television. TV was probably in his early 30s. He was a stay-at-home dad. I don't know the exact circumstances. The economy at the time wasn't great, so I don't know if it was a conscious decision that his wife had a better paying job so he stayed home with the kids, or if he was in between jobs during the time we knew each other and it just took abnormally long for him to find something. I was under the impression it was a decision they made.

I do know one of the reasons we lost track of each other was because they moved a couple of hours away where the cost of living was lower.

TV told me that he pirated software because he could afford the computer, barely, but he couldn't

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afford the software. The way he saw it, he'd spent the equivalent of a mortgage payment on the computer, so he bought into the ecosystem, and was entitled to it.

The flaw in that argument, of course, is that none of the software publishers ever saw any of that money that he paid for his C-64 and disk drive.

But I know what it's like to have two kids, a single income, and have a hard time finding the money to pay the bills. I was in that situation in a different decade than he was, so I had different options than he had. If our situation had been reversed, I may have felt the same way he did.

And don't get the idea that TV was some sort of a radical freeloader. And don't get the idea of a suburban housedad living a double life as a member of an elite cracking group, going to rave-atmosphere demo parties and cracking software into the wee hours of the morning while his kids slept. He looked and acted exactly how you would expect an ordinary guy in the working class suburbs of St. Louis to look and act. All the way down to voting conservative, going to church regularly, and listening to conservative-leaning talk radio on AM. But there was this computer revolution going on and he didn't want to miss out on it.

DID COMMODORE BRING THIS ON THEMSELVES?

It's possible to make an argument that Commodore created the situation by targeting a demographic that could barely afford the computer, and couldn't afford software. A Commodore and a disk drive cost about $50 more than a Nintendo, but then you could buy a box of disks for $10 and pirate $400 worth of software. So for the cost of a game console and one game, you could get in on the computer revolution in addition to playing some fun games.

I never thought to ask TV if he considered that when he bought the computer. It would have been interesting to hear the answer.

And even though Commodore and Atari owners have the reputation for pirating stuff, I know piracy happened on other platforms. Cracked Apple software exists too.

And clearly there were people buying software, because there were software publishers advertising, and they advertised heavily enough to support four monthly magazines about Commodore computers for half a decade.

But it's also clear the lost sales made the economics difficult for publishers, especially publishers that targeted platforms that didn't have an installed base of 12 million like the C-64 did, or a higher-income demographic like the Apple II, or, ideally, both a large install base and a higher-income demographic like the IBM PC.

PIRACY WAS COMPLICATED

Everything about piracy was complicated. The reasons it happened were complicated. The reasons it persisted was complicated. The social issues were complicated. But I'll also argue it wasn't all bad.

Here's how my journey went. Although I never joined any cracking groups, I did crack some software with a disk editor. In college, I used those skills to recover word processing documents from corrupt disks for my classmates. I became a go-to data recovery guy. That and my knowledge of hardware got me my first non-retail, non-food service job. It also led to my first serious relationship. The job and the relationship were both problematic, but we learned what we were looking for. If you never have any setbacks in life, then you don't ever learn how to solve anything.

When my second employer made the Wall Street Journal for all the wrong reasons, I used those skills to conduct a data forensics investigation that led to them collecting a settlement of nearly

$10 million. No one else in the organization knew where to begin. I sat down with an attorney, asked her what she needed to make her case, and used a disk editor to find it. After a few more setbacks, I worked my way into a position to help hundreds of large companies solve complex computer security problems.

My story isn't unique. And there was no one to teach us assembly language, the use of sector editors, data structures, and the other skills we learned figuring out how to pirate games. Those games provided the motivation we needed to sit down and teach ourselves useful skills. And then we figured out, sometimes by accident, that we could use those skills to become productive members of society.

HAPPY ACCIDENTS

Another happy accident was that piracy led to preservation. In some cases, the pirated copies of software were all that we had left. And some commercial retro computing products use the cracked copies of software because it's more practical. So 1980s piracy led to 2020s commercial products.

The problem of software piracy seemed simple enough. Software was more expensive than some people could afford. But that led to other things. It also required a domino effect to solve, one pirate at a time.

And it's not lost on me that I'm talking about piracy in an age where large AI corporations are pirating my content, forcing me to compete with my own work. Some good will eventually come of that too. In the meantime, I feel for the content creators who won't survive it, knowing it's possible I'll be one of them. Like the writer of Ecclesiastes said thousands of years ago, there is nothing new under the sun.

BIGGEST CRT EVER: SONY'S PVM-4300

-by Guest Contributor Dave Farquhar

(Connect this to your Commodore!)

Move over, GE Widescreen 1000. In 1989 in Japan, Sony introduced to the largest Trinitron CRT ever built, the KV-45ED1, also known as the PVM-4300. And in 1990, they imported 20 of them to the United States, just in time for the recession.

SONY'S PVM-4300/KV-45ED1

The Sony PVM-4300 was the largest CRT TV ever made. Its 45-inch tube provided 43 inches of visible improved definition TV. It stood about 27 inches tall.

Sony's part number suggests it has a 45 inch tube inside. But in a rare case of truth in advertising, Sony advertised it as a 43-inch model. It weighed about 450 pounds, stood about 27 inches tall, and it wouldn't fit through a standard door frame. That's probably okay, it's not like someone was going to use this as a bedroom TV. This thing was going in your living room.

In Japan, it sold for 2.6 million yen, but in the United States, it retailed for $40,000, a significant

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markup. To be fair, shipping them across the Atlantic and then throughout the United States must have been expensive. And news articles in 1990 said Sony dealers would not allow any bickering. They would throw in a couple of options like the separate tuner or speakers. But no discounts.

Sony said at the time they hoped to sell 80 of them that year, but the recession may have had something to say about that.

THE BIGGEST CONVENTIONAL CRT EVER

The Sony PVM-4300 was a conventional CRT, unlike the GE Widescreen 1000 which was a projection set. Projection TVs could be bigger and cheaper. But if you wanted the clearest picture, a big CRT was where it was at.

It was a conventional CRT that worked with over the air signals, but like many larger TVs of the era, it used a technology called IDTV to enhance the picture quality. The "ID" stood for "improved definition." IDTV sets had a buffer so they would store successive frames and interpolate them rather than interlacing them the way a conventional CRT TV worked. They also had circuitry to detect motion and perform image stabilization to further enhance the image. The result wasn't as good as HDTV. But it gave high rollers a better picture until HDTV. HDTV arrived in 1998, but articles at the time estimated 2005. The Chicago Tribune warned in 1990 that these $40,000 TVs would be obsolete in 15 years, but the salesperson countered that every TV would be obsolete in 15 years.

It's also likely that someone in the market for a $40,000 TV didn't worry about obsolescence. In 1990, the GE Widescreen 1000 looked dated, and it wasn't 15 years old yet.

WHY SO EXPENSIVE?

The KV-45ED1/PVM-4300 cost about 8 times as much as Sony's second most expensive model at the time, which had a 29-inch screen. That's largely because the KV-45ED1 had to be built by hand. Sony could mass produce its smaller TVs. This was a product for buyers who weren't worried about the price.

It is unclear how many units Sony sold, and it's not exactly clear how many survived. A few photographs of surviving units have surfaced over the years, but this TV isn't something owners have ever been keen to talk much about. A Chicago area dealer told the Chicago Tribune in 1990 that someone had purchased one, but that the buyer wanted to remain anonymous. Since there may only be 10 of these units still in existence, I don't blame the current owners for wanting to remain anonymous.

25 SHOWS AND COUNTING

-by Robert Bernardo

Back in the early 2000's, did I ever think I was going to be organizing Commodore/Amiga shows? Not a chance! I was a user and a Fresno Commodore User Group member who liked to travel and visit Commodore shows and clubs. Back in the 1980's I had visited the World of Commodore shows in Anaheim and then in San

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Francisco. Then in the 90's, I visited the Lansing Area Commodore Expo, the Classic Gaming Expo, the SWRAP Commodore Expo, and the Chicago Commodore Expo, the Amiwest Show, and even the gigantic World of Amiga 1999 in London. I visited clubs, little knowing that they soon would be gone – the Commodore Hayward User Group, the Fremont-Union City-Newark-Hayward User Group, Commodore/Amiga West, Diablo Valley Commodore User Group, Stockton Commodore Users Group, Sacramento Commodore User Group (not to be confused with the Sacramento Amiga Computer Club), and A Bakersfield Computer User Society.

Each show, each club had its own organization, its way of doing things. For giant shows like World of Commodore and World of Amiga which had thousands of attendees, I was not even thinking about how they would be put together. If had thought hard, I would have thought there would be a committee of knowledgeable veterans who would have the money and the organizational abilities to carry through with each show. With no formal organizational structure I could discern, the clubs I attended had anywhere from one to eight members present. Me? I was just a single person. Let others figure out the details of their shows and clubs, and I would be happy to follow along as an ordinary attendee.

However in 2004, Jeri Ellsworth of CommodoreOne fame contacted me, saying that there should be a West Coast Commodore show. About that same time, Bruce Thomas of of geoSpecificCD fame also contacted me, saying there should be a West Coast C= show. With such urging from important community members, I decided to take the plunge and create a West Coast show.

Bruce Thomas said he would help me, even though he was in Edmonton, Alberta, Canada. I wanted to meet with him to iron out all of the details. In the summer, I drove from California through Oregon and Washington (with a stop at C= technician Ray Carlsen's house), took the ferry to Victoria, British Columbia, and then boarded an airliner to Edmonton. I met with Bruce the day after I arrived in Edmonton. He would find a hotel for the attendees, and I would find the venue (note that the venue was not necessarily the attendees' hotel). I determined that Las Vegas would be the best place to have a Commodore show – lots of hotels/venues, the hub of transportation, plenty of other activities instead of computers, and a strong, local Commodore club.

In 2005 the Commodore Vegas Expo, a.k.a. CommVEx (a play on the defunct show, ComDEx) was born, and it started off strongly. We had attendees from the Midwest Commodore shows, and enthusiasm was high. Over the years through 2019, CommVEx had its ups-and-downs, most years very successful, other years a struggle to make ends meet.

In 2016 Stephen Jones of Seattle's Living Computers Museum invited me to do a show in his museum. I came up with the name of the Pacific Commodore Expo NW, PaCommEx. PaCommEx began in June, 2017, and I had not only the general public coming in to see the other museum computers but also members of the Puget Sound Commodore User Group and the Seattle Retro-Computing Society. Though the Covid pandemic interrupted the expo in 2020-2022, it was resurrected in 2023 at a new venue, the Old Rainier Brewery Intraspace, and has continued since then.

In 2018 the members of the Southern California Commodore & Amiga Network wanted a show done in the Los Angeles area, not in Las Vegas which would require a long drive. With their help, I opened up the Commodore Los Angeles Super Show in April, 2019, and it was successful,

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too. Little did I know that the Covid pandemic would close CLASS down the following year. However, it came back in 2021 and has carried on since then.

2019 was a watershed year. I was organizing 3 shows at once, the Commodore Vegas Expo, the Pacific Commodore Expo NW, and the Commodore Los Angeles Super Show. That would never happen again. Though I've brought my computers to the Vintage Computer Festival West, the Bay Area Maker Faire, and the Los Angeles Maker Faire, I was not organizing those events; I was merely an exhibitor.

15 CommVExes, 5 PaCommExes, and 5 CLASSes later, here I am in 2024. 25 shows! CLASS is booked for April, 2025. If everything goes well, there will be another PaCommEx next June. I have the small Rocklin Maker Faire and the giant Bay Area Maker Faire in October, besides being the videographer for the October Amiwest Show, too. Busy… busy…

In all these years, I've met hundreds of attendees at shows, whether those shows were mine or not. The children in those early shows are now adults, and my organizing friends and I have grown older. In all those years, I dearly hope that those attendees have been entertained, have been educated, have been enlightened by our computers.

Robert Bernardo on the drive to Las Vegas for the first CommVEx, 2005. Photo by Larry Anderson

ON THE COVER

The editor once again shows his appreciation for superheroes by posting a picture of the ever famous super team, The Justice Society of America. Starting from left, looping up, then down to the right:

The Flash,The Spectre, Starman, Hawkman, Black Canary, Doctor Fate
In center (with American flag): Green Lantern

Club Officers

Officers & Keypersons

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Vice-president ..... Roger Van Pelt
Secretary/Treasurer …..... Dick Estel
The Interface Editor …..... Lenard Roach
Librarian …..... Roger Van Pelt
Club equipment …..... Roger Van Pelt
Meeting place reservation …..... Dick Estel

-The Small Print-

The Fresno Commodore User Group is a club whose members share an interest in Commodore 8-bit and Amiga computers. Our mailing address is 185 W. Pilgrim Lane, Clovis, CA 93612. We meet monthly at Panera Bread, 3590 West Shaw, Fresno, CA. The meetings generally include demonstrations, discussion, and individual help.

Dues are $12 for 12 months. New members receive a "New Member Disk" containing a number of useful Commodore 8-bit utilities. Members receive a subscription to The Interface newsletter, access to the public domain

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disk library, technical assistance, and reduced prices on selected software/hardware.

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Disclaimer

The club, its officers, members, and authors are not responsible for the accuracy of the contents of The Interface or the results of actions based on its contents.

Our disk library contains over 3,000 public domain programs for the C64 and C128. Members are entitled to copies of these disks at no cost if a blank disk is provided. We do not deal with pirated, copyrighted, violent, or obscene programs. Please call our attention to any programs found in our library which may violate these standards.

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