



THE EDITOR'S GODZILLA

by Lenard R. Roach

HOW THE <blip> DO YOU DO IT?

I have been approached by a few people who have read my narratives on the Commodore either out of magazines, books, or newsletters and they often ask me, “How do you come up with these ideas in BASIC programing for the Commodore computer?” I think I may have hashed this subject out before in some publication but I don't mind going over it again and explain the method to my madness. Hopefully, I can tell it without putting people to sleep with the narrative.

The big basis behind what I write on the keyboard of my Commodore is usually something that I really need for myself here in the home. For the lack of a subject, let's use my newest program which is only a few years old called, “The Ledger.”

When my future ex-wife came up with a bill tracking system using an old ten column ledger sheet and a pencil I debated with myself for years on how I could transpose this database onto the Commodore 64. I think the real spur in my saddle blanket came at the beginning of the month when all the data had to be carried over from the end of last month to the start of the new month. She usually left that task to me and for hours I would work at my desk transposing all the data. Then, to make things even more sore on my developing carpel tunnel at the time, she would

want to pay the first half's bills “since I had the ledger out and was already working on it.” This meant writing out the checks and logging them into the ledger and tallying the numbers so we could see where we stood on our budget for that month. When the pain started to get substantial in my wrist, that is when I decided enough was enough and it was time to put something down in BASIC and get started on taking something from paper and putting it onto “the big screen.”

The first thing I had to decide was, “How will I get the numbers to change so I can keep an accurate tally on what I am paying each time I make a payment?” The answer came when I studied the algebraic equations that make the Commodore calculate like, well, a calculator. That came when I assigned each number a letter equivalent. For example, C became the total of B plus A, then at the start of a new pay cycle the Commodore reassigned C to equal A by using the expression of $C=A$. B, then, became the new payment amount which was either preassigned or could be changed by the user using keyboard input. It took me several days to make these formulas work out right since I failed basic algebra in junior high and high school. Sorry, no college for this idiot. All the algebra I know now I learned from reading Commodore programming magazines and manuals.

Once the “heart” of the program (the main subroutine that would make the whole program worth working) was hashed out and dealt with to my satisfaction, I began to work on the “garnish” which would allow the user of a program to input the proper data that would get everything lined up for the “heart” to take over and make the program do its job. For “The Ledger,” I decided that the logical thing to do was add needed information that a user could read the name of the debtor, the address, phone number, email, how much is totally owed to the debtor, how much the agreed payment would be, when it had to be paid, and by what method. These particular pieces of

information would be placed in as PRINT INPUT commands. Only those pieces of information needing numerical commands received INPUT commands without the use of the \$ tag along.

Once the “heart” and “garnish” were all put in place, I alpha tested a program to see how well everything fit as a whole. One thing I do like is when a program comes together and works great on first run but that has happened to me only once and I don't think it will be repeated. I know there's usually a loose command that I needed to tie up or I forgot to add an INPUT somewhere. Sometimes it took longer to get a program to “clean up” properly than it did to actually write something that worked. That is, it worked right, but it just didn't “feel” right.

The last thing I did to was get out a copy of an ASCII graphics screen writing program and start working on a introduction screen that I could tie into the whole program using a series of PEEKS and POKES and make it look as professional as possible. I know that many users would like to see something more “hi-res” but until I can find a program that would allow me to draw up such images many users will have to stick with the cheap ASCII graphics offered by the keyboard of the Commodore. I personally don't mind them since they are an upgrade to what I have been using, which was nothing.

Once everything was finally complete and ready for what I thought was distribution to the Commodore public, I try to find one or two users out in the Commodore universe who were willing to take some time out of their busy lives and beta test the work just to see if it could be used by a average Joe. Sure, alpha testing told me a lot but as I go through a program countless dozens of times, I began to find ways around the quirks and still get the program to work the way I wanted it to. With beta testing, I would have a way to find out where I have been “cheating” and make the necessary corrections.

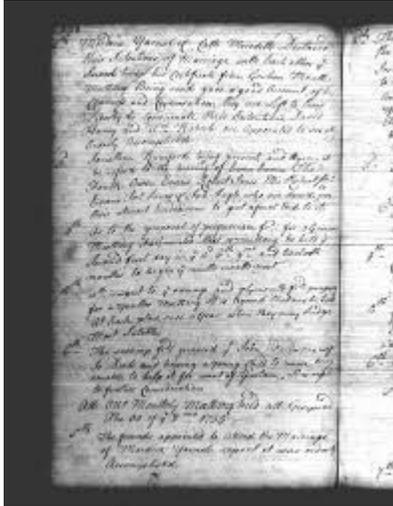
Out of all this, there is still one weakness that I have yet to conquer in writing BASIC programs for the Commodore and that is the need to create user manuals for all that I have written. Even though I have written about five Commodore programs in my lifetime only two of them have actual user guides and those would be “The Envelope Addressor V4.2” and “Check It Out.” Each of these programs were published in magazines. “TEA 4.2” was published in “Loadstar” and “Check It Out” was published by “RUN.” The other three are available to the public by either mail order or whenever I get a chance to get out to a Commodore related event usually held on the West Coast. Many users of Commodore have informed me that my work on the machine is becoming antiquated but in my own personal use, which is how these works began in the first place, they are all still very much a vital part of the work that I do to keep things going here at the house.



WE ARE LOOKING FORWARD TO HAVING THE NEXT ISSUE OF “THE INTERFACE” OUT IN THE MAIL OR AT THE MEETING NO LATER THAN MARCH 15TH, 2020.

MONTHLY MEETING REPORTS

by Robert Bernardo & Dick Estel



November 2019

by Robert Bernardo

Our November meeting started with Dave arriving early, Robert arriving a few minutes late, and Roger arriving later. Because the weather was good, Robert decided to set up all the computer gear in the covered patio of the Panera Bread Restaurant. That decision would come back to haunt him.

After small talk and lunch, Robert talked a little bit of his job of videotaping the presentations at the October Amiwest Show in Sacramento. He spent about 18 hours filming the event which spanned 5 days and then many more hours editing the videos and uploading them to Youtube.

He then spoke about the upcoming Downtown Los Angeles Mini-Maker Faire which was to happen on December 7. He would have Commodores, Amigas, and a Texas Instruments TI-99A at an exhibit entitled, "Classic Los Angeles Computers!" He invited all to come to

the show.

Robert brought in some hardware from the collection of the late Bogdan Macri of the Southern California Commodore & Amiga Network. The hardware was Hewlett-Packard graphing, scientific calculators, and Dave and Roger picked up a few of them – all for free!

Dave, Robert, and Roger then tried out the latest C64 games -- Rocket 'N Roll (shoot spaceships), Keystone Kapers (a platform game ported from the Atari 2600), Croaky (a Frogger-type game), Alien 8 (based on the Spectrum Hide original message game where the player searches various rooms to solve an unspecified mystery), and Zilsspleef (a game in which you have to avoid hidden mines and solve an unspecified mystery, too). Then there is the music player compilation, XOXOX Softpack (which was incomplete because it was missing certain player modules).

Unfortunately, Dave had to leave earlier than usual; the car exhaust coming from nearby Shaw Avenue was bothering him as the group sat in the restaurant patio. Robert apologized and said that he didn't know Dave had a sensitivity to the air pollution.

With Dave gone, Robert wrapped up the meeting by showing off the new C64 Halloween games – Luna (fly a witch and shoot the flying skulls), Forbidden Forest (move a Rambo-type character and burn down spiders with his flame thrower), and Get Witchy (a Flappy Bird-type of game except the player controls a witch).

December 2019

by Robert Bernardo & Dick Estel

First, the roll call... Present were Robert Bernardo, Roger Van Pelt, Mike Fard, Dave Smith, Dick Estel, and Randy Stoller. Roger's brother Aaron joined us for lunch only.

The club voted to make a \$50 donation to St. Jude's Children's Hospital, a charity we have supported for many years.

It being election month, the existing slate of officers was re-elected by acclamation: President, Robert Bernardo; vice president, Roger Van Pelt; Secretary-Treasurer, Dick Estel; and Board of Trustees, Brad Strait and Dave Smith.

Robert talked a bit about the Classic Los Angeles Computers exhibit that he had at the December 7 Downtown Los Angeles Mini-Maker Faire, but he talked more about how filmmakers Rory Muir and Jerold Kress were still videotaping his Commodore activities (videotaping which has carried on over a span of more than 10 years!). In fact, they traveled all the way to Visalia to film the building of Robert's tool shed which will house Commodore and Amiga hardware and software.

The Commodore L.A. Super Show (CLASS) returns for a second year, April 25-26, 2020. Our show in Seattle, the Pacific Commodore Expo NW (PaCommEx) will take place June 13 and 14. More information about both shows is available on-line.

(<http://www.dickestel.com/fcug.htm#commvex>)

Dave reported that newly-built C64s, named the 64 Maxi, are now available for pre-purchase in Europe. And the Commodore 65 appears ready to rise from the dead. Robert has donated to a fundraiser to produce molds for cases for the Mega65, based on the never-released C65 from CBM. We also saw most of a YouTube video created by the lead Mega65 developer, a video in which he tells of the computer's features.

Robert showed the Ultimate 64 from the estate of the late Bogdan Macri, the machine being valued at about \$650 as customized with new Kickstarter case and MechBoard 64 mechanical keyboard. We checked out a number of programs

saved on the USB sticks that came with the computer. One was GEOS 64, which ran from .D64 file in joystick mode, but did not recognize any RAM expansion because it did not have the proper Configure file. Another one was Oregon Trail, but Robert died before he reached eastern Tennessee (OK, I don't really know where the Oregon trail goes, but he died pretty quickly.)

We took a look at Lenard Roach's bill and budget work disk 3.1, but without entering actual data and without a connected printer, we could not really appreciate all the program's features.

We also tried to look at our New Member disk, with plans to update it, but the menu would not load. We have other copies in the library, so hopefully we can return to this project.



CHUCK PEDDLE PASSES AWAY

by Guest Contributor Cade Metz

Chuck Peddle Dies at 82; His \$25 Chip Helped Start the PC

His invention brought digital technology to a new breed of consumer devices and powered early Apple and Commodore computers.

Chuck Peddle, the engineer and entrepreneur who

helped launch the age of the personal computer after designing a microprocessor that sold for a mere \$25, died on Dec. 15 at his home in Santa Cruz, Calif. He was 82. His partner, Kathleen Shaeffer, said the cause was pancreatic cancer.

In 1974, Mr. Peddle and several other engineers were designing a new silicon chip at the Motorola Corporation in Phoenix when the company sent him a letter demanding that he shut the project down.

Mr. Peddle envisioned an ultra-low-cost chip that could bring digital technology to a new breed of consumer devices, from cash registers to personal computers. But his bosses saw it as unwanted in-house competition for the \$300 processor Motorola had unveiled that year.

So Mr. Peddle moved the project to MOS Technology, a rival chip maker near Valley Forge, Pa., taking seven other Motorola engineers with him. There they built a processor called the 6502. Priced at \$25 — the cost of a dinner for four, and the equivalent of about \$130 today — this chip soon powered the first big wave of personal computers in both the United States and Britain, including the Apple II and the Commodore PET.

“The market needed a cheap one,” Mr. Peddle said in a 2014 interview with the Computer History Museum.

In later years Intel, the Northern California chip giant, would come to dominate the personal computer business. But the market was seeded in Valley Forge, not Silicon Valley.

“Chuck Peddle is one of the great unsung heroes of the personal computer age,” said Doug Fairbairn, a director at the Computer History Museum in Mountain View, Calif. “Virtually all of the early, successful, mass-market personal computers were built around the 6502, not chips from Intel or anyone else.”

[Regarding a] 1975 advertisement for Mr. Peddle’s MOS 6502 processor, priced at \$25, “The market needed a cheap one,” he later recalled.

Charles Ingerham Peddle was born on Nov. 25, 1937, in Bangor, Maine, the oldest son of Thomas and Maxine (Denno) Peddle. His father was a salesman, his mother a commercial illustrator. In high school Chuck dreamed of being a radio announcer. (Television was still in its infancy.) But after traveling to Boston for an audition, he realized that his talents lay elsewhere. At the suggestion of a neighbor, he enrolled in the engineering school at the University of Maine.

After graduation, his aim was twofold: he wanted to live in California, and he wanted to build computers. So he took a job with General Electric, where he helped design early space vehicles, electronic cash registers and so-called time-share computers, massive mainframes that could be shared across companies, schools and other organizations.

Later, at Motorola, he worked on the 6800 chip, a \$300 processor used in pinball machines and other arcade games, before turning his attention to a lower-cost processor. When the company sent him a letter killing the project, he responded with a letter of his own. He told Motorola that because it was abandoning the project, all the work he had done now belonged to him.

When he first took the idea to MOS Technology, one of the company’s founders, L.J. Sevin, turned him down, worried that Motorola would sue. So Mr. Peddle took the project to the other founder, John Paivinen, with whom he had worked at General Electric. Mr. Paivinen gave his approval.

After Mr. Paivinen had brought Mr. Peddle and the other Motorola engineers to Valley Forge and they built their low-cost chip, Motorola sued, just as Mr. Sevin had predicted. MOS fought the suit

for years before paying a \$200,000 fine.

By then, its \$25 chip was feeding the rise of the personal computer. At MOS, Mr. Peddle built a personal computer around his new chip called the KIM-1 (the letters stood for Keyboard Input Monitor), and he started selling chips to a pair of young entrepreneurs, Steve Jobs and Steve Wozniak, who were building a company called Apple.

In 1976, MOS was acquired by a calculator company, Commodore Business Machines, and Mr. Peddle became its chief engineer. Soon after, Mr. Jobs and Mr. Wozniak offered to sell Apple to Commodore, but Commodore declined. Mr. Peddle and his new company built their own personal computer around the 6502: the Commodore PET, which sold for \$495.

When the Commodore PET, which used Mr. Peddle's MOS 6502 microprocessor, was introduced, "That's when the personal computer market really took off," Bill Seiler, who worked alongside Mr. Peddle on the first Commodore computer, said in a phone interview.

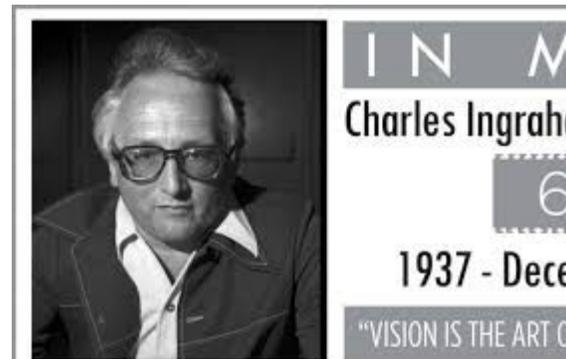
The 6502 also powered the Atari gaming console, which brought video games into the home, and the BBC Micro, which introduced personal computers to Britain.

In the early 1980s, Mr. Peddle founded another PC company, Sirius Systems Technology, where he designed a machine called the Victor. In later years he built NNA Corporation, which made a computer with removable hard drives, letting people carry data from place to place — a forerunner of the USB stick.

In addition to Ms. Shaeffer, Mr. Peddle is survived by three brothers, Douglass, Duncan and Shelton Peddle; a sister, Marthalie Furber-Peddle; three sons, Thomas and Robert Peddle and Vernon Prestia; three daughters, Debbie and

Diane Peddle and Cheryl Prestia; seven grandchildren; and five great-grandchildren. His two marriages ended in divorce.

The PC age is now on the wane, but Mr. Peddle's big idea is just getting started. "His big thing was distributed intelligence, putting microprocessors in everything," Mr. Seiler said. "And nowadays, microprocessors are going into everything."



Honoring Chuck Peddle;
Father of the 6502
and the Chip That Went With It

by Guest Contributor Bil Herd

December 25, 2019

Chuck Peddle, the patriarch of the 6502 microprocessor, died recently. Most people don't know the effect that he and his team of engineers had on their lives. We often take the world of microprocessor for granted as a commonplace component in computation devices; yet, there was a time when there were just processors, and they were the size of whole printed circuit boards.

Chuck had the wild idea while working at Motorola that they could shrink the expensive processor board down to an integrated circuit... a chip. [Motorola] made their living selling \$14,000 processor boards and [told him] to knock off all of the noise about a \$25 alternative.

In Chuck’s mind this was permission to take his idea and the engineering team elsewhere. Chuck and his team started MOS Technologies in the 1970’s in Norristown, PA, and re-purposed their work on the Motorola 6800 to become the MOS 6502. Lawsuits followed.

If you asked Chuck about his contribution, he would dismiss the claim that he was the father of the KIM-1 single board microcomputer of the early era. “Look at the keyboard; you can tell that was done by someone on the calculator side of things,” I believe I heard him say.

When asked about the 6502, his reply was that he was more proud of the peripherals, the Input/Output (I/O) chips that supported a microprocessor. These support chips made it possible for a user to interact with the microprocessor, and his reply was something along the lines of the fact that you couldn’t have a terminal or cash register system unless there was a way to read the user’s keys and display something back.

The story of the venerable 6502 is one of those that we will never know just how much influence it had on people’s computing experience, even today. You may have not played an Atari game yourself, but the chances are good that the architect/designer/programmer of your computer did. The designer of the game Minecraft started on a Commodore C128, a 6502-based system as was its famous predecessor the C64, and if you have ever seen a TV show about the 1980’s, they inevitably show an Apple computer, based on the 6502.

Chuck and crew were gone by the time I got to Commodore, though I was officially hired by MOS first. We sat in their same chairs in their same offices and could feel their presence. I used to joke about a still warm cigar in the ashtray or spotting Peddle’s unicorn down the hall, a reference to the wizard-like aura we attributed to

the early guys. I also used to call the early team the “Motorola 5”, in tribute to their “on the run” status from Motorola, though there may have actually been 6 of them.

[As we sat in those same offices], it seemed to me that the lights dimmed, and I thought I could smell incense and hear chanting as [a] schematic was pulled from the lowest drawer... apparently early schematics were printed on parchment, such was the condition of the old hand-drawn schematic. My friend Benny, father of many a disk drive you may never have heard of, brushed at something written lightly on one of the pad symbols and then laughed when he read what had been penciled in. What was written was in a sense a tribute to Chuck on a pin that he had lobbied for specifically to be included in the 6502, the Set Overflow (SO) pin; the pad had been renamed CPS for the Chuck Peddle Special pin.

To Chuck Peddle, one of the fathers of the modern processor AND the chips that made it usable: 1937-2019.

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-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 in the meeting room of Bobby Salazar's Restaurant, 2839 North Blackstone Ave., 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 disk library, technical assistance, and reduced prices on selected software/hardware.

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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.