

# Vintage Computer Festival West



# Program Guide

# Schedule

## Friday August 4

10:00 am

Show opens

10:00 am

**On Jeri** – *Jeri Ellsworth*

Jeri will discuss her long career in geekdom and her lifelong passion for gaming and inventing with a special emphasis on vintage computing.

11:00 am

**What can Vintage Computing tell us about the Next Generation of Engineers** – *Byron Stout*

The cost wars of the 1980's placed personal computers into millions of households for the first time ever. This turned a generation of young people onto engineering concepts, so they were ready when the Internet needed engineers in the 1990's. Will future generations be ready when the Next Big Thing hits? Let's talk about why things worked for older generations, but our younger generations perceive the world differently. I'll also share my Top 10 Ways to work with Gen Z and Gen A kids.

11:00 am - 12:00 pm

**CHM IBM 1401 Demos**

12:00 pm

**Restoring the Apollo Guidance Computer + live Apollo DSKY screen demo** – *Marc Verdiell, Eric Schlaepfer, Ken Shirriff*

The crew that restored the Apollo Guidance Computer and DSKY (Display Keyboard) unit will discuss their efforts as well as give a live Apollo DSKY screen demo.

1:00 pm

**Open Circuits: The Inner Beauty of Electronic Components - a book interview** – *Eric Schlaepfer, Windell Oskay, Ben Jordan*

The panel will discuss the Open Circuits book and stories around its creation and content.

2:00 pm

**Windows War Stories** – *Dave Plummer*

Dave will talk about his long and storied career with Microsoft working on the early Windows iterations as well as his other computer technology related efforts since.

2:30 pm - 4:00 pm

**CHM PDP-1 Demos**

3:00

**Oh Canada, what did you invent?** – *Rob Carnegie*

Canada's deep (and often unseen) roots in the field of computing from the days of the Ferranti-Packhard to early Micro-computers and mainframes. Rob will reveal some startling milestones in Canadian computing history, including: the invention of the trackball, Windows network based email and the sound card! The world's first video game!! A Canadian woman fixed the UK's EDSAC!!! Another Canadian woman invented assembly language and we'll present never-before-seen video of her recounting the experience.

4:00 pm

**Modern Tools for Sprite Animation** – *Byron Stout*

I used to use graph paper to design sprites in the 1980's but now you don't have to. There are so many wonderful modern tools that can help you build amazing sprites. We'll talk about some of the free and paid tools that are available and then use the newest version of CBM PRG Studio to build a simple game with an animated character.

5:00 pm

**Three Generations of Animation Machines**

– *Joe Decuir*

A presentation of several generations of early animation hardware. This includes the Atari 2600 game console, the Atari 8-bit personal computer and the Amiga computer with demos.

6:00 pm

Show closes

# Saturday August 5

9:00 am

Show opens

10:00 am

**Current State of the Aquarius** – *Sean Harrington*

A brief journey through the history, death, and rebirth of the coolest little 8-bit computer system you didn't know you needed to care about.

11:00 am

**Early Commodore History** – *Leonard Tramiel, Dave McMurtrie*

Leonard Tramiel had a close association with Commodore from the earliest days and has plenty of stories to tell. His talk will be a series of those stories with ties into the early Commodore products, personalities and, maybe, a scandal or two.

11:00 am - 12:00 pm

**CHM IBM 1401 Demos**

12:00 pm

**Early Apple and Mac Talk** – *Greg Berkin*

What early Mac development was like, meeting Steve Jobs, working with Apple in the 80's, publishing Mac software, hosting Woz at the White House in '06, and much more.

1:00 pm

**Early Atari History, Stories** – *Al Alcorn*

Al was a part of the birth of Atari and had his hand on just about everything they did, right from the beginning. He even had something to do with bringing a couple of guys named Steve in on some projects.

2:00 pm

**A life inside of Moore's Law: Tales of a journey at Commodore, Apple, Microsoft, and more**

– *Bob Welland*

A talk about "The Long and Winding Road" that covers things and people Bob has worked with over the years... Early personal computers IMSAI, Processor Technology, Cromemco; Working at Mark Williams and the first cleanroom clone of Unix (Coherent) and Mark Williams bid to be the OS provider for the first IBM-PC; the sad attempt

DEC made to make a PC (the Rainbow-100); Going to Commodore to work on the C900 (which used Mark Williams Coherent OS), the Amiga 500 effort, Unix at Commodore; Going to Apple, the Apple Newton, the first ARM processor; Leaving Apple to found a startup in the area of mobile client-server computing – pre-internet; Newton's collapse; Going to Microsoft, the Internet Wars, IE3, Javascript.

2:30 pm - 4:00 pm

**CHM PDP-1 Demos**

3:00 pm

**Webcaster's Roundtable** – *Bil Herd, Marc Verdiell, Dave Plummer, Jeri Ellsworth, Adrian Black, Kate Fox, June Tate-Gans*

A cadre of technology webcasters will talk about their experiences interacting with technology audiences about topics vintage and new over the medium.

4:00 pm

**How to revive a dead open source project (my journey with AYAB)** – *Carson Holgate*

AYAB is an open source project to retrofit vintage knitting machines to be controlled by computer. When I joined the project two years ago, it was dead. Now, it's a thriving and active community. Let me tell you how we got here.

5:00 pm

Show closes

Closing Remarks and Awards



*The role of events like VCF in the ecosystem of retro-technology enthusiasts can't be overstated. They*

*are gathering places for enthusiasts, each with a different desire in their interactions. There is value in both strict preservation and direct access to retro-technology, and understanding how they can interact, to further both long-term preservation and interactive recovery of the context of use. Such collaborations can only help to illuminate the history of computers for everyone.*

**CHRIS GARCIA**

**CURATOR, COMPUTER HISTORY MUSEUM**

# Exhibitors

VCF exhibitors put amazing effort into displaying their favorite historic computing systems. Be sure to visit them all, ask questions, play, learn, Tweet, and take lots of pictures! Perhaps you'll be inspired to exhibit your own pride-and-joy at VCF West 2024 next year.

## **Tele-Typin' Zone** – *Dustin Williams*

"TTY? You mean a Teletype?" Yes, but no! Come see the revolutionary technology that enabled the deaf to communicate freely for over half a century, all from the comfort of their own homes.

## **Supercharged Macs of the 90s and 00s**

– *Chris Turpin*

Yeah, 90s and 00s Macs are cool on their own, but they can do so much more, too! Our exhibit shows off these Macs but with some awesome upgrades (some period correct and some not) that really shows off what they can do.

## **x86 from the 80's to the 90's** – *Jason Howard*

Play games on an Turbo XT (10Mhz) XT class computer, 386 DX-33Mhz, 486 DX4-100. A variety of other, newer but still vintage machines will also be available.

## **Reviving Dialup Connectivity: From 56k to ISDN** – *Chris Satterfield*

Did you never get to experience how slow 56k is? Never get to experience how fast ISDN is? Here is your chance! We'll have everything from a proper dial-up First-Class BBS to Browsing the Web!

## **C64i Commodore 64 Improved** – *Francis Bernier*

A new C64 motherboard with modern features.

## **The Compact Macintosh Garden**

– *Steven Brunwasser*

A collection of various compact Macintosh computers from 1984 to 1996.

## **British 70's & 80's Computing - ETI Triton - Acorn Atom Repros** – *Ian Lockhart*

Original and repro Computers from the late 1970's and 80's.

## **Silicon Graphics Twin Tower Chassis**

– *Zachary Hardesty*

The Silicon Graphics Power Series (and Professional IRIS) were housed in a very distinctive split pedestal deskside. This machine was originally configured as a 4D/220, but is currently housing the boards for a Silicon Graphics Crimson!

## **TSS/8: Timesharing on a PDP-8/m**

– *Josh Dersch*

In 1968, Digital Equipment Corporation introduced TSS/8, a timesharing system that ran on a PDP-8 minicomputer with 12K or more of core memory. Come play with a PDP-8/m running the TSS/8 Timesharing system and experience the freedom of having your very own virtual 4K PDP-8!

## **Vintage Apple and Space** – *RR Auctions*

An amazing set of Apple and Space related artifacts up for auction at RR Auctions!

## **Portable Mac Garden** – *Jeremy Herrman*

To complement the amazing Compact Mac Garden I will showcase as many designs of Mac portables / notebooks as I can amass including some rarer items like a Colby Walk Mac and Outbound Systems notebook.

## **S100 computers, New and Old** – *Jay Cotton*

A Cromemco 68030 based Unix 5 machine with a few terminals. And at least one new vintage S100 computer.

## **STUPID Computer: VAPID Edition** – *Steve Toner*

The STUPID (Simple Twelve Bit Unadorned Instruction Decoder) Computer started out life as a term project in a college class in 1978. Resurrected and shown 40 years later

at VCF West in 2018. New enhancements for 2023 provide vector graphics capabilities. Introducing the VAPID (Vector Adorned Programmed Instruction Decoder) Edition.

**50 Years Of Unix** – *Ryan Schiff - System Source*  
A Collection of Various Unix Operating Systems.

**CA80 the First Polish Trainer Kit of the 80s**  
– *Kris Sekula*

The main exhibit shown will be a “trainer computer” developed in Poland in the early 80s that many engineers used as an introduction to electronics and programming. Based on the Z80 CPU, and 8 digit VFD display, this cool looking “calculator” device can be compared to today’s Arduino.

**NT RISC** – *Antoni Sawicki*

Windows NT on RISC machines. Alpha, MIPS, PowerPC, Itanium.

**Core Memory Interactive - Core64** – *Andy Geppert*

Get hands-on with core memory! Learn, draw, game and hack in core memory with a magnetic stylus. Core memory is associated with the Apollo Guidance Computer and almost all computers that were popular from the mid 50’s through the late 60’s. Adding LEDs to show the state of each core memory brings a whole new range of possibilities. There are also weave-your-own core memory kits available. See [www.core64.io](http://www.core64.io) for more information.

**British Computers, Turtle Robots and LOGO**  
– *Steve Crozier*

The LOGO programming language with low cost microcomputers and turtle robots was a big part of education during the 1980s. Learn about the history and proliferation of these systems and their capabilities.

**Retail Afterlife** – *Chris Whitley*

Vintage Gaming PCs on display for hands on fun!

**Rabbit Hole Computing** – *Rabbit Hole Computing LLC*

Rabbit Hole Computing designs and manufactures legacy computer storage solutions, and accessories, for vintage computer system.

**Maxed Apple Workstations of Yesteryear**

– *Jordan Hayes*

Some random macintosh workstations souped up and ready for some gaming!

These Macs are different, unique machines ready to show off their true upgraded power with things like a 2 GHz cube or a 500 MHz 9600. These machines will all be playing together with games like quake or unreal tournament in a LAN party.

**Arduino-hacking a Knitting Machine from 1980**

– *Machine Knitters Guild of the San Francisco Bay Area*

An Arduino replacement for the control panel of a vintage knitting machine from 1980. Originally it read its patterns via an optical scanner controlled by an early microprocessor. Now we can design a pattern on the computer and send it to the Arduino which controls the solenoids of the patterning mechanism. This open source project was originally designed by a team in Germany, see [AYAB-knitting.com](http://AYAB-knitting.com) and <https://github.com/AllYarnsAreBeautiful>

**Knitting machines and AYAB** – *Carson Holgate*

An open source project to retrofit vintage knitting machines to be controlled by computer

**BackBit + Audio** – *Evie Salomon*

Now supporting dozens of 8-Bit systems, BackBit makes modern accessories for your vintage computers and game systems. Want to replace a broken sound chip or improve stock audio on a system? BackBit has you covered! Experience modern implementations of the Commodore SID, Konami SCC for MSX, and POKEY for Atari 7800.

**Signs of the Times** – *Francis Bauer*

A collection of microprocessor/microcontroller based electronic signs and displays. The displaying of information/data to us human beings has evolved over the years from static signs/displays to animated ones. This exhibit will showcase a number of signs/displays utilizing LED technology from the 1980s onward.

**PDP-11/05 and Mini-Unix** – *Jay Logue*

A demonstration of PDP-11/05 with ME-11 memory expansion (28KW core) running Mini-Unix.

**Differential Analyzer** – *Tim Robinson*

A model of Vannevar Bush’s 1931 differential analyzer - a mechanical analogue computer will be displayed. The model is constructed entirely from Meccano construction set parts. It will be demonstrated solving non-linear differential equations.

(Continued...)

# Exhibitors, continued...

## **Project Ivy** – *Katarina Melki*

Personal collection of rare restored IBM ThinkPads from the mid 90's. Primarily a pair of restored ThinkPad 701C's and a rare ThinkPad 360P tablet computer.

## **Bluetooth Controllers for Retro Computers**

– *Ricardo Quesada*

The exhibit will be about how we can enhance retro-computers with modern add-ons, in particular by using a Bluetooth adapter that lets us use modern Bluetooth controllers like gamepads and mice.

## **AmiWest presents Amigas** – *Jerry Gray*

Various Amiga Machines up and running for your enjoyment.

## **Mac-on-tosh: Mac Software Running Natively\* on Unusual Hosts (\*CPU not emulated)**

– *Keith Kaisershot*

Ever run Mac software on a NuBus card? What about System 6 on an Amiga? Despite not being Macs, these examples are very possible. Why? Because!

Could other 68K and PowerPC hardware from the 80s and 90s run Macintosh software?

Come see for yourself a selection of some of the first "Hackintoshes" running the classic Mac OS / System Software – some sanctioned by Apple, some not.

## **Sun Collection** – *Julian Carter-Carvalho*

Collection of various workstations manufactured by Sun Microsystems.

## **Painting with Mario and Friends** – *Mia Brandenburg*

Create simple tunes, take pictures, and even animate with 1990s Nintendo tech! Not everyone had a computer, or some people couldn't get free reign of the "family computer" as children in the 1990s and 2000s. For some of us, the Game Boy was the only, or first, portable technology we had to use for digital photography and editing. This exhibit allows you to step back in time with Mario Paint, Game Boy Camera, and friends, and even take home some of your creations!

## **Tektronix Model 31 Programmable Desktop Calculator (1973)** – *Stanley Ruppert*

The Tektronix Model 31 calculator included a thermal printer, magnetic tape cartridge storage, and instrumentation interface.

10-digit mantissa with 2-digit exponent (Sperry Panaplex neon displays) and transcendental functions. Programmable with 5120 steps,

640 registers. Demo, documentation, and restoration notes.

## **DE68 - 1976 Complete 6800 Briefcase Computer**

– *Stanley Ruppert*

DE68, a complete self contained 6800 microcomputer system in a briefcase designed and sold in 1976 by Digital Electronics Corporation out of Oakland, CA. Includes tape storage, electrostatic printer, 53 Key ASCII keyboard and Vacuum Fluorescent display (VFD). 5.5K ROM monitor includes mnemonic code entry and translator/disassembler. Very early "portable" computer used for training and education. Demo, documentation, and restoration notes.

## **The VintNerd** – *Steve Diederich*

YouTuber showing off some fun Atari 8-Bit stuff.

## **SX64 - Portable Commodore Power**

– *Joeri van Haren*

A Display of a multiples of the SX64, and some exploded version to demonstrate the insides.

## **Commodore Tape Drives, "Life before the floppy drive"** – *Chuck Hutchins*

A collection of computer cassette drives and Commodore 8 bit computers.

## **Sphere Computers!** – *Ben Zotto*

Sphere was an early microcomputer manufacturer outside of Salt Lake City. Their computers are historically interesting, but were unloved in their time and are obscure today. We will have a working Sphere system to demonstrate, with a paper tape punch to let visitors punch a small souvenir tape banner directly from the Sphere system. Interactive multimedia!

## **Unlikely Partnership between SGI and IBM**

– *Nicholas Bustamante*

IrisVision is an expansion card developed by Silicon Graphics for IBM compatible PCs in 1991 and is one of the first 3D accelerator cards available for the high end PC market as an adaptation of the graphics pipeline from the Personal IRIS workstation.

## **Sun2, Sun3, 10BASE5 and 10BASE2 Hardware**

– *Robert Harker*

On display are early Sun2/120 and Sun3/160 workstations, a Sun2/150 server and early Ethernet 10BASE5 and 10BASE2 hardware. These are Motorola MC68000 CPU based Multibus and VME bus based designs. Circuit boards and computers will be on display.

## **Bitfixer's Bits And Bytes** – *Michael Hill*

A collection of vintage computers with some modern enhancements.

### **Rare Computers From Japan** – *Duncan Mac Dougall*

Japan had its own world of personal computers that, while popular in their native land, did not reach Western shores. This exhibit aims to show several different running examples of these impressive platforms that most of the West missed. We will be demonstrating at least one playable example of an X68000, a PC-98 series system, an MSX2+, a PC-88, and an FM-TOWNS.

### **COSMAC 1802 Based Systems** – *David Henderson*

A hands-on presentation of several systems based on the RCA CDP1802 CMOS 8-bit microprocessor designed by Jerry Herzog based on a prototype created by Joseph Weisbecker. On display are the RCA COSMAC VIP, Quest Super Elf, Netronics ELF II, RCA Studio II game console and the Yugoslav COMX-35 and PECOM 64 computers.

### **Amiga Expansion Bus from Ranger to A2000**

– *Dale Luck*

The Amiga expansion bus Autoconfig architecture was to eliminate dip switches. It also supported embedded device drivers on hardware and file system support on the hard drive itself. The expansion bus that Amiga Los Gatos defined for Ranger made its way into the Westchester A2000. See also original mock up of Ranger.

### **Everything but the C64** – *Theo Koulis*

The Commodore 64 (C64) is arguably the best known of all the 8-bit computers produced by Commodore. In the public eye, the C64 often overshadows some of the other interesting and enjoyable Commodore computers. This exhibit will showcase an assortment of Commodore and Commodore-inspired 8-bit computers which are not the C64.

### **Industrial VIA C3 Gaming** – *Michael Brough*

What do you get when VIA adapts one of the last “3rd party” Socket 370 x86 CPUs into a wee little BGA chip for industrial applications? Some fun small vintage PCs that’s what! Come have some industrial grade fun playing Windows 98 and MS-DOS games on a couple VIA C3 based industrial ITX boards authentically running vintage operating systems.

### **Battle of The GUI** – *Adheesh Parekar*

Displaying the first versions of graphical users interface systems from 1985. Macintosh System 0.97, Windows 1.01, GEOS on a Commodore 128 and Apple Desktop System (MouseDesk) on a //c.

### **Selfies in 1987 with the Sharp X68000**

– *Thomas Daede*

Capture a picture from a camera, edit it on the Sharp X68000, and print it to take home! The

X68000 was a desktop computer released only in Japan in 1987, and one of its main selling points was its multimedia capabilities. It shipped with an optional accessory to capture NTSC video frames with 65,536 colors, ready to edit on the screen. These can then be printed on full-color printers.

### **FLEXing the Color Computer - Restoration of FHL Color FLEX** – *Michael Furman*

FLEX and OS-9 were both powerful and popular Operating Systems for MC6809 Based computers. FLEX was largely left behind and forgotten by CoCo users. This year I started a project to restore Color FLEX from Frank Hogg Laboratory into working usable state in the 21st Century. I'll demonstrate how I've done the restoration, the Operating System itself, and also show other interesting historical artifacts for FLEX on the Color Computer and Dragon computers I've found along the way.

### **Think 80's Apple** – *Greg Berkin*

Various rare early Mac software and systems relating to the early days of Lisa and Apple Macintosh fervor.

### **The Macintosh Librarian** – *Kate Fox*

Showing off various Mac related projects as shown on the “Macintosh Librarian” Youtube channel.

### **FOPAL** – *David Cortesi*

Friends of the Palo Alto Library. A book sale to benefit the library fund.



**Recent years have seen the passing of some of the most influential people in our industry: Jack Tramiel, Steve Jobs, Dennis Ritchie to name but a few. As these giants recede into the past we are challenged with preserving our digital heritage in the form of the visions that these pioneers shared with the world. I strongly recommend that everyone, especially families and the younger folk who will be inheriting this wealth of technology, take a trip to the Vintage Computer Festival and experience just a bit of the founding of our technologic age.”**

**BIL HERD**  
CREATOR OF THE COMMODORE 128

# Hello, world!



**Welcome to the Vintage Computer Festival West 2023.** You're about to embark on a fantastic family-friendly adventure backward in time.

You will see and touch dozens of historic computers from many decades gone – everything from big iron to eight-biters. You'll also experience some creative new replicas, modern enhancements, and new retrothemed systems. You will meet some historic people, learn their insider stories, and perhaps pick up our nerdily awesome t-shirt! While you're here, remember to tour the amazing museum all around us: they're a terrific host and worth a return trip. Be sure to talk about us online: #vcfwest

Happy computing,  
- The Vintage Computer Federation

Vintage Computer Federation

Our mission is to preserve computing history through education, outreach, conservation, and restoration. We strive to accomplish this through family friendly hands-on activities at our museum, at regional and global events, and by fostering and nurturing the expansion of our on-line and in-person communities. The Vintage Computer Federation is a 501 (c)3 non-profit.

In addition to Vintage Computer Festival West, we also own VCF East (New Jersey each spring). In addition, there are Vintage Computer Festivals independently run that we encourage everyone to attend, including: VCF Southwest (<https://www.vcfsw.org/>), VCF Midwest (<https://vcfmw.org/>), and VCF Southeast (A part of SFGE) (<https://gameatl.com/>)

If you are interested in creating your own chapter or festival, please contact us at [info@vcfed.org](mailto:info@vcfed.org).

**Website:** [vcfed.org](http://vcfed.org) | **VCF Forum:** [forum.vcfed.org](http://forum.vcfed.org)

**Facebook:** <https://www.facebook.com/vcfederation>

**YouTube:** <https://www.youtube.com/@vcfederation>

**Twitter:** <http://www.twitter.com/vcfederation>

**Instagram:** <http://www.instagram.com/vcfederation>

**Discord:** <https://discord.gg/32maJ6gddU>