

Vintage Computer Festival East



Program Guide

Commodore Classroom

Come visit our "Commodore Classroom". Learn the essentials of programming in BASIC and 6502 Assembly language on real Commodore 64 computer hardware. Every vintage computer hobbyist shouldn't miss experiencing the appeal of programming with Commodore's full screen editor, a feature that was ahead of its time among its competitors. Familiarize yourself with this historical computer with a hands-on coding experience. Learn the user-friendly BASIC language, or get deep into the hardware using low-level Assembly language.

Daily schedules include periods of open computer time, during which you can explore programming, games, and applications that we have available.

Learn about the history of Commodore Business Machines. Attend a presentation provided by Dave McMurtrie, creator and administrator of the Commodore International Historical Society Facebook group, and the www.commodore.international website.

Class size is limited. Please come to the classroom in Room 2 (9059) at 8 am each day to sign up for a spot in that day's classroom schedule.

Friday April 14

TIME	TOPIC
8:00 am - 9:00 am	Class signup
9:10 am - 10:10 am	Beginners Commodore 64 BASIC – <i>Doug Crawford</i>
10:20 am - 11:30 am	Intro to Commodore 64 Assembly – <i>Jeff Salzman</i>
11:30 am - 1:40 pm	Open Computer Time
1:50 pm - 2:50 pm	Advanced C64 BASIC – <i>Chris Fala</i>
3:00 pm - 4:00 pm	Advanced C64 Assembly – <i>Jeff Salzman</i>

Saturday April 15

TIME	TOPIC
8:00 am - 9:00 am	Class signup
9:10 am - 10:10 am	Beginners Commodore 64 BASIC – <i>Doug Crawford</i>
10:20 am - 11:20 am	Advanced C64 BASIC – <i>Chris Fala</i>
11:30 am - 12:30 pm	Intro to Commodore 64 Assembly – <i>Jeff Salzman</i>
12:40 pm - 1:40 pm	Open Computer Time
1:50 pm - 2:50 pm	History of Commodore – <i>Dave McMurtrie</i>
3:00 pm - 4:00 pm	Advanced C64 Assembly – <i>Jeff Salzman</i>
4:00 pm - 5:00 pm	Open Computer Time

Sunday April 16

TIME	TOPIC
8:00 am - 9:00 am	Class Signup
9:10 am - 10:10 am	Beginners Commodore 64 BASIC – <i>Doug Crawford</i>
10:20 am - 11:20 am	Intro to Commodore 64 Assembly – <i>Jeff Salzman</i>
11:30 am - 12:30 pm	Open Computer Time
12:40 pm - 1:40 pm	Advanced C64 BASIC – <i>Chris Fala</i>
1:50 pm - 2:50 pm	Advanced C64 Assembly – <i>Jeff Salzman</i>

Schedule

Technical Talks – Classes – Consignment – Glitch Works – Commodore Classes

Attend our VCF University classes on Friday; talks on Saturday and Sunday, plus demonstrations of our working Univac 1219; and all weekend, spend time in our makerspace, shop in our consignment area, and attend Commodore-themed classes. Read more about each event on the next page.

	VCF University Friday April 14	Saturday April 15	Sunday April 16	All 3 Days
7:30 am	DOORS OPEN			
8:00 am		EXHIBITS OPEN		
8:00 am - 9:00 am	Modern Tools for Commodore 64 Sprite Animation – <i>Byron Stout</i>	Quantel's Paintbox: The Computer that changed what we see – <i>Adrian Wilson</i>	An Introduction to Teletext – <i>Christian Berger (virtual)</i>	
9:00 am			EXHIBITS OPEN	CDL MAKERSPACE (Building 9059) Glitch Works Kits (Right Door) Glitch Works kit workshop will feature XT-IDE rev 4B cards this year. A small number of other kits will be available, as supplies permit. Have an XT-IDE that doesn't work properly or needs tested? Bring it by, we'll have an IBM 5160 PC/XT on hand for testing! Last year's S-100 repair efforts were popular, so we'll be conducting them again. We recommend only bringing systems that have been power-up tested as there's not really enough time during the event to dig into a total unknown. Will have 56x XT-IDE kits available, as well as bare boards. LEARN TO SOLDER with Neil Cherry Beginners stop by to learn the basics of soldering. Commodore Classes (Building 9059, Room 2) Learn the essentials of programming in BASIC and 6502 Assembly language on real Commodore 64 computer hardware. See page 2-3 for more details. CONSIGNMENT is in 9010-C (the cafeteria down the hall from the talks) The consignment area allows people to buy and sell vintage computer related items during our VCF shows.
9:10 am - 10:10 am	Verifiable Credentials: Intro and discussion – <i>Maki Kato</i>	#FujiNet - Latest Editions – <i>Thomas Cherryhomes</i>	What can vintage computing tell us about the next generation of engineers? – <i>Byron Stout</i>	
10:20 am - 11:20 am	The Ghost of NABU Past – <i>Leo Binkowski (virtual)</i>	I Was There for the Revolution: Lessons and Reflections from 35 years in EdTech – <i>Jerry Crisci</i>	40 Years of Apple Lisa - Now with Source Code! – <i>Jason Perkins</i>	
11:30 am - 12:30 pm	Novasaur TTL Retrocomputer – <i>Alastair Hewitt</i>	Computer Literacy in the 70's and 80's – <i>Liza Loop</i>	20 things to do with a computer thanks to Seymour Papert & Marvin Minsky – <i>Cynthia Solomon, Brian Silverman (virtual)</i>	
12:40 pm - 1:40 pm	Toy CPU – <i>Jim Hall (virtual)</i>	The Early Years of Online Education – <i>Margaret Morabito (virtual)</i>	1:00 - 2:00: Univac 1219 Demo at VCF Museum	
1:50 pm - 2:50 pm	Emulating the NABU PC – <i>Brian Johnson</i>	From C64 DTV to Tilt Five: A lifelong passion for gaming inventions – <i>Jeri Ellsworth</i>		
3:00 pm - 4:00 pm	Streamer Roundtable Bil Herd (Hackaday) Adrian Black (Adrian's Digital Basement) David Lovett (Usagi Electric) Fran Blanche (Fran's Lab) Jeri Ellsworth (C64 DTV)	Streamer Roundtable Bil Herd (Hackaday/Coriolis Effect) Dave Murray (The 8-Bit Guy) Michael Stanhope (Mike's Mac Shack) Steve Matarazzo (Mac84) Sean Malseed (Action Retro)	Computer Literacy 2023: What you need to know about computers today – <i>Liza Loop</i>	
4:00 pm - 5:00 pm				EXHIBITS CLOSE - DOORS CLOSE
5:00 pm	EXHIBITS CLOSE - DOORS CLOSE			

Schedule

Technical Talks – Classes – Consignment – Glitch Works – Commodore Classes

Friday April 14 – VCF University

Modern Tools for Commodore 64 Sprite

Animation – *Byron Stout*

I used graph paper to design Sprites in the 1980's but now you don't have to. 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 animated characters.

Verifiable Credentials: Intro and how we might use them as a community

– *Maki Kato*

Verifiable Credentials is a new technology that allows easy fast and mechanical verification of a claim. This talk will cover the basics, current state of the technology, and then dip into fun/useful ways we might can use this in the vintage computing community.

The Ghost of NABU Past

– *Leo Binkowski (virtual)*

Fresh out of high school, 18 years old in 1982, Leo Binkowski started working part-time for an exciting new Canadian company called NABU that was building a computer, a network, and content for a cable connect computer market. Soon he became Senior Programmer and later Director of Content Development. He got to witness its birth, its dash for greatness, and its final demise, and apparent resurrection in retro. Here is his story.

Novasaur TTL Retrocomputer

– *Alastair Hewitt*

How do you run CP/M on two dozen TTL chips? Find out in this technical talk on the hardware, firmware, and software of the Novasaur TTL Retrocomputer.

Learn 8-bit machine language with the Toy CPU emulator

– *Jim Hall (virtual)*

I teach a university class about the history of computing. To explain how early computers worked, I created the Toy CPU emulator - a reduced instruction set computer in the style of the Altair 8800 or IMSAI 8080. I'll explain how I created the Toy, and how to create and enter programs into the Toy.

Emulating the NABU PC

– *Brian Johnson*

A talk about the architecture of the NABU PC and emulating it in MAME.

Streamer Roundtable

– *Bil Herd, Adrian Black, David Lovett, Fran Blanche, Jeri Ellsworth*

Join us for an unscripted roundtable discussion featuring your favorite web casters and YouTubers as they delve into their passion for retro technology! From vintage computers, gaming consoles, and software to classic gadgets and the early days of the internet, this engaging conversation will take you on a nostalgic journey through the evolution of technology.

Saturday April 15

Quantel's Paintbox: The Computer That Changed What We See

– *Adrian Wilson*

I will explain how technologically advanced the Quantel Paintbox was when it was launched in 1981 and how the work created on it laid the foundations for today's digital world.

FujiNet - Onward March to All The Platforms

– *Thomas Cherryhomes*

I talk about the current status of FujiNet, the different issues we've had to overcome for multi-platform support, and what we have planned for the future.

I Was There for the Revolution: Lessons and Reflections from 35 Years in EdTech

– *Jery Crisci*

In this entertaining session, participants will learn about the history of technology in schools from the perspective of both an educator, software developer and author. The presenter will share fascinating stories of how the evolution of technology has impacted education, including lessons that were learned from his career in EdTech. The history of computer use in schools can provide insight into how we can effectively use technology with students today.

50 years later. Glancing back at Computing in Education

– *Liza Loop*

Ed tech pioneer, Liza Loop, reminisces about how computing has been used in education over the last 5 decades and offers some suggestions about keepers and trash heapers.

The Early Years of Online Education

– *Margaret Morabito (virtual)*

A historical look at the development of online distance education, from the late 70s through the 80s and into the 90s with the arrival of the

Internet. Morabito will include a look at her own contribution to this area of education with CALCampus.

From C64 DTV to Tilt Five: A lifelong passion for gaming and inventing

– *Jeri Ellsworth*

Jeri will tell her story from her early years of disassembling toys and programming a Commodore 64 to her career of inventing and entrepreneurship. She will talk about the computer stores that she owned, inventing the C-One chip, the C64DTV, CastAR, freelance ASIC and FPGA designer and current company Tilt Five.

Streamer Roundtable

– *Bil Herd, Dave Murray, Michael Stanhope, Steve Matarazzo, Sean Malseed*

Join us for an unscripted roundtable discussion featuring your favorite web casters and YouTubers as they delve into their passion for retro technology! From vintage computers, gaming consoles, and software to classic gadgets and the early days of the internet, this engaging conversation will take you on a nostalgic journey through the evolution of technology.

Sunday April 16

An Introduction to Teletext

– *Christian Berger (virtual)*

This (pre-recorded talk with live Q&A) will give a technical overview of Teletext, a digital text based service offered by many TV stations in Europe since the mid to late 1970s. The goal of this talk is to enable listeners to be able to understand the specifications enough to be able to play with that medium.

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 Revolution came in the late 1990's. What are we doing to prepare future engineers so they will be ready when the Next Big Thing hits? Let's talk about why things worked for older generations but our up and coming younger generations perceive the world differently. As a bonus, I'll share my Top 10 Ways to work with Gen Z and Gen A kids.

40 Years of Apple Lisa - Now with Source!

– *Jason Perkins*

Going over the history of the Apple Lisa, and recent developments like the documentary and OS source code release.

20 Things to do with a computer thanks to Seymour Papert & Marvin Minsky

– *Cynthia Solomon and Brian Silverman (virtual)*

Cynthia Solomon and Brian Silverman, who collaborated on the creation of LOGO, will talk about creating expressive learning environments for children. They will also talk about their collaboration with Seymour Papert in creating Logo, the first programming language designed specifically for children. Cynthia will talk about her 1971 paper with Papert, "Twenty Things to do with a Computer" which contained a rich assortment of computer-based projects. She will also talk about her current projects, TurtleStitch, a way of applying turtle geometry and graphics in creating designs for a computerized embroidery machine.

Flying to the Moon: A view from the Apollo Guidance Computer

– *Frank O'Brien*

A flight to the moon seems impossibly complex, especially given the technological state of the art in the 1960's. While the details are indeed formidable, the concepts are surprisingly easy to understand. We will discuss the three key components used in the Apollo spacecraft to voyage from the Earth to the Moon and back home again. Importantly, these components - the computer, the guidance platform, and the optics system - all worked together to fly the spacecraft with incredible accuracy. We will also answer the basic questions of spaceflight navigation: Which way is up? Where am I? Where am I going? As a special bonus, we will describe in detail how to land on the Moon!

The Unseen World of PowerPC

– *Michael Casadevall*

The PowerPC line of processors was one of the most notable competitors to IBM. Originally created by IBM as the POWER series, it was later used as a replacement for the aging 680x0 architecture, and eventually became the cornerstone of Apple machines throughout the 90s and early 2000s. What is considerably less remembered is the effort to attempt to displace the long standing Windows-Intel monopoly. Throughout this talk, we'll talk about the broader context of the PowerPC processor, and a look at what might have been. We'll take a look at actual shipping betas such as Solaris and OS/2 for PowerPC, as well as more 'what could have been', talking about Copland, Workspace OS, and more.

Achieving a Diamond Age of Learning

– *Liza Loop*

Learning futurist, Liza Loop, speculates on how current and future technology may change what and how we humans learn and teach.

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 East 2024 next year.

"Totally Normal" Computing & 40th Anniversaries

– *Michael Stanhope, Sean Malseed, Steven Matarazzo*

Insanely Upgraded Macs and 40th Anniversary of The Compaq Portable, Apple Lisa, and Apple IIe.

Core64 - Interactive Core Memory

– *Andy Geppert*

Core Memory was the predominant computer memory type in the 60's. It was used as RAM and ROM in the Apollo Guidance Computer systems. A Core64 kit gives you the opportunity to weave your own Core Memory and bring it to life in an interactive way with a magnetic stylus and LED Array to show the states of the cores. Check out this exhibit to play a game of Pong in and through Core Memory!

Heathkit H-89

– *Alex Bodnar*

Demonstration of loading vintage software from a Windows 10 laptop to the H-89.

Science and Music Education with Apple II computers

– *Eric Rangell*

In the 1980s Apple computers were in many schools with many educational titles available, some which required additional hardware. This exhibit demonstrates the Broderbund Science Toolkit which included light and temperature sensors. Recently preserved music education software by ECS will be shown, using the Passport Midi Interface for the IIgs. Attendees will be able to use this software and kids who try it will receive a name badge printed by a Sinclair ZX81. The exhibit will also display research materials related to the University

of Delaware's pioneering use of the Plato system and GUIDO music education software.

Yugoslav School Computers

– *Vlado Vince*
As a follow-up to my VCF East 2021 exhibit (8-bit computers in Socialist Yugoslavia), this year's exhibition will focus on the role of domestic Yugoslav microcomputers in school, with both a Galaksija and an original Orao school computer. Additionally, I will show a few of my hardware projects for Yugoslav computers, including the Orao PS/2 adapter and the Orao WiFi RS232 adapter.

Usagi Electric's Old Stuff

– *David Lovett*
Behold! My stuff. Hello, my name is David and I run the Usagi Electric YouTube channel. I couldn't bring my big stuff (the full fledged Centurion Minicomputer) this time, but I do have some interesting things that I've been working on. Swing on by and let's chat about old minicomputers, homebrew computers and word processors!

Behind the Screens - Genericable

Ever wondered what powers The Weather Channel? How about Prevue Guide? We're showcasing the weather stars that powered the local forecast in your area from the 1980s until today, ranging from custom machines to Pentium PCs. We'll also be showing the secret Amiga in your cable headend that ran the scrolling Prevue Guide!

Dave's Retro Video Lab: Back In Time

Rewind – *David Distinti*

Our fully interactive exhibit showcases the history of the video camcorder. From the start of the camcorder revolution in the 1980s through the early 2000s, we have most of the

iconic models. Guests can travel back to the 80s, 90s and early 2000s with the press of a button. We have a TV production switcher which visitors can operate as well. Our retro video lab tech, Dave, is a broadcast television director with a major network and is happy to explain how these old camcorders inspired him to pursue a career in television. Dave can even provide tips and tricks of the trade for future YouTubers.

Please visit our YouTube channel:

<https://www.youtube.com/@davesretrovideolab2709>

Colossal Cave for Text to VR

– *Marcus Mera*
Play the TRS-80, Apple II and IBM versions of Colossal Cave, with original boxed games on display. Also try out the Virtual Reality version!

DEC in Education

– *Ethan Dicks*
Experience educational computing of the early 70s. Try your hand with BASIC and FOCAL programs on a Digital Equipment Corporation PDP-8-based "EduSystem" or learn about logic gates with a DEC Computer Lab.

Living Books: Interactive Animated Stories

– *Peter Fletcher, Heather Fletcher*

In the early 1990's, home computers featuring multimedia CD-ROM capabilities arrived on the scene. This allowed programs to become larger and more dynamic than anything available on floppy disks, and the extra storage allowed improved graphics and sounds. Voices and music could be streamed directly from the CD. In 1992 Broderbund Software released the first Living Books edutainment title "Just Grandma and Me", bringing to life the children's book through animation, mini games, and clickable objects. Other titles featured Arthur, Dr. Seuss characters, and the Berenstain Bears. This new medium gave teachers a fun new way to introduce reading to younger children. The diverse "clickable" areas in the stories emphasized a "whole learning" approach, combining reading with science, math, social skills and art concepts. Our exhibit will feature many Living Books for the visitors to explore.

Oddities and Commodities

– *Collin Mistr, Chad Baxter*

Showcasing a collection of unique, heavily

modified Apple computers, including custom, never before offered upgrades. You'll get to see some of these upgrades done live in person! We will also be presenting a few soldering workshops, see our table during the event for the schedule.

Motorola M88k processor based systems

– *Maki Kato*

I'll have the following machines to show and talk about: Omron Luna 88k and Motorola MVME system, and a NCD 88k XTerm.

Quantel's Paintbox

– *Adrian Wilson*

I will be exhibiting one of the world's last remaining working Quantel Paintboxes, which attendees have the rare opportunity to use. There will also be period ephemera from Quantel. I will be bringing capture and output devices so that people can take home a copy of the art they create on the Paintbox.

Tandyland

– *Mike Loewen*

The Radio Shack TRS-80 Model I was part of the 1977 "Trinity" of home computers, and Tandy continued to market home and business computers well into the 80386 era. This exhibit will feature some of the larger business systems such as the Model 16B and 6000, as well as a few of the smaller systems like the Model I, III and 4P. Special emphasis is placed on after-market accessories, including modern expansion and emulation.

Altos Multiuser Systems - MP/M & Xenix OS

– *Matthew Bergeron*

Altos Computer Systems introduced their small multi-computer systems in 1977. They were widely used in office and inventory environments and were very robust, stable, and well-built – the computers on display operate today as if they were brand new! On display will be Altos server models 486, 580, 586/986, and 886 which were introduced in 1982. These systems include the 8086, 8088, 80186, and 80286 processors. The 580 is running MP/M II and the other models are running Microsoft Xenix 3.0 up to 3.2. They also ran a very interactive menu system called the Altos Office Manager where users could easily access programs and custom applications, limiting the need of the command prompt. Altos introduced

(Continued...)

Exhibitors, continued...

the "Altos WorkNet" networking system they developed, where multiple Altos servers could be networked together via a RS-422 port. Some of the systems even had TCP/IP ethernet capabilities.

50 Years of UNIX – *System Source: Ryan Schiff, Ryan Burke, Brian Boellner*

Celebrate 50 years since the release of UNIX with a 20 system retrospective.

TeleVideo - Original and Enhanced – *Patrick Finnegan, Alexander Younts*

This year an original TeleVideo TS-806 multi-user system will be set up alongside a modern re-creation, to show what the original experience was like compared to an enhanced modern version, which operated with the same hardware and software.

PDP8 ASCII Art Photo Booth

– *David Gesswein*

Get your photo printed using ASCII characters by a printer driven from a DEC PDP8, with a custom video interface.

Modems – *Will Donzelli*

Modems modems modems! IBM, CSUs, Leased lines, and POTS.

Exploring IBM Classroom LAN Administration System

– *Chris Lenderman, Kevin Moonlight*

Used by public school systems across North America in the early 1990s, the IBM Classroom LAN Administration System (ICLAS) was a network system that provided office personnel, administrators, teachers, and students easy access to word processors, spreadsheets and other productivity and educational tools. This exhibit will be hands-on and offer visitors the opportunity to see, explore, and interact with ICLAS on retro IBM hardware. The exhibit will also feature information about how to configure your very own ICLAS setup. We'll also introduce an online version of ICLAS that's available for the world to explore and interact with other ICLAS users online. We'll also cover some of the technologies used to connect ICLAS, including Ethernet and Token Ring, and will offer the ability to explore them interactively!

Silicon Graphics Octane - Three Gamers, One Computer – *Lorenzo Mollicone*

A demonstration of the multi-seat capabilities of the SGI Octane computer using the CADduo add-on card. This setup allows multiple people to use one computer to run CAD software, create 3D models, or as demonstrated, play multiplayer Quake, all from the same computer!

Workstation Overload - Custom & Unique 90s Workstations – *Stephen Mayo,*

Guilherme DeOliverraSilva, Ykaro Rocha

Remember when Windows and Unix ran on more than just Intel cpus? Or when Windows only ran on a single processor? We will provide a tour of the various workstation options from the 90s up until the end of RISC workstations. Systems will include Alpha (LX164), Sparc (SparcAXE), PA-Risc (C8000) and early multi-core Pentium systems mounted in standard desktop cases. The focus will be on Windows or Unix for those platforms not supported. Enjoy networked games and applications on these systems and explore the various options available at that time.

Paper Tape – *Corey Cohen*

Leaving his normal Apple and S100 exhibits behind this year, Corey Cohen will be demonstrating how paper tape punches and readers worked. Papertape / Punchtape was the de facto standard for archival storage and the loading of programs and data into computers until the magnetic disks became the norm. Visit this exhibit for a personalized mylar punch tape bracelet gift.

The SDS 420 – *Kennett Classic Computer Museum* – *Bill Degnan, Joe Tooman*

Our exhibit will consist of a restored Scientific Data Systems (SDS) model 420 computer. The SDS 420 computer is a 6502-based CPU system with twin Persci 277 drives. Proprietary disk OS and runs various software including a papertape version of MS BASIC adapted for the 6502.

The Unseen World of PowerPC

– *Michael Casadevall*

Most of us probably know of the PowerPC chip. It after all was at the heart of Apple machines from the late 90s to the early 2000s, as well as the cornerstone of IBM's

AIX platform. Less well known are the backend and server uses of the PowerPC chip, as well as Microsoft's and Sun's ports of Windows NT and Solaris to the platform. Hosted by NCommander, the World of PowerPC provides interactive examples of the efforts to try and break Windows-Intel monopoly of the 90s and early 2000s. This exhibit includes multiple IBM RS/6000s running Windows NT, and AIX, as well as a rare Motorola PowerStack II. Demos include hand ported applications, videos, and features the IBM RS/6000 Model 150 that was used for the hour long documentary "What Does It Take To Run DOOM On A \$10,000 IBM RS/6000 From 2001?"

Silicon Graphics o2 Exhibit – *Mike Milewski*

Come see a SGI o2 running a wide range of applications from Doom and Quake to Alias Wavefront PowerAnimator, Maya and more!

Silicon Graphics - Quake – *Andy Diller,*

Jameel Akari

Play Quake on an SGI Local-Area-Network.

Bifurquaked Octane – *Thomas Gilinsky, Michael Shanley, Eric Graf, Val Falcone*

Within the purview of the larger SGI exhibit – a demonstration of the raw graphical and compute power of Silicon Graphics hardware, visualized by running two parallel Quake instances off of one SGI Octane workstation. The Octane has dual 400 MHz R12K processors, 1.5 GB of RAM, and dual SE graphics modules, one with Texture memory installed. It will be seated between two full keyboard/mouse+monitor setups, each plugged into the Octane.

Early Eighties Luggables – *Nicolas Mailloux*

See the Macintosh FDHD, Osborne Executive, and Compaq Portable 1.

Novasaur and Gigasaur TTL

Retrocomputers – *Alastair Hewitt*

The Novasaur TTL Retrocomputer returns to VCF East in its final configuration. This machine is built from three dozen TTL chips and uses banked memory to emulate multiple 8080 CPUs. These support a micro kernel, RAM disk, and two independent CP/M 2.2 instances for both console and TTY. A bonus this year is the Gigasaur, a clone of the original Gigatron TTL Microcomputer in the same form factor as the Novasaur.

A Love H8 Relationship – *Glenn Roberts*

This exhibit will highlight the venerable Heathkit H8 computer and the many efforts of the Society of Eight-Bit Heathkit Computerists (sebhc.org) to keep it alive and well. There will be demonstrations of old-meets-new capabilities including modern versions of a wide range of H8 boards plus a newly fabricated cabinet. Gaming, computer graphics and sound will be demonstrated via the TMS9928A video processor and AY-3-8910 sound chip with an OSSC scan converter for HDMI display. Interfaces to Raspberry Pi, WizNET, ESP32, PCA9665, FTDI VDIP and more have opened doors to networking, USB, I2C and more. Long live the H8!

Making Music With the Macintosh

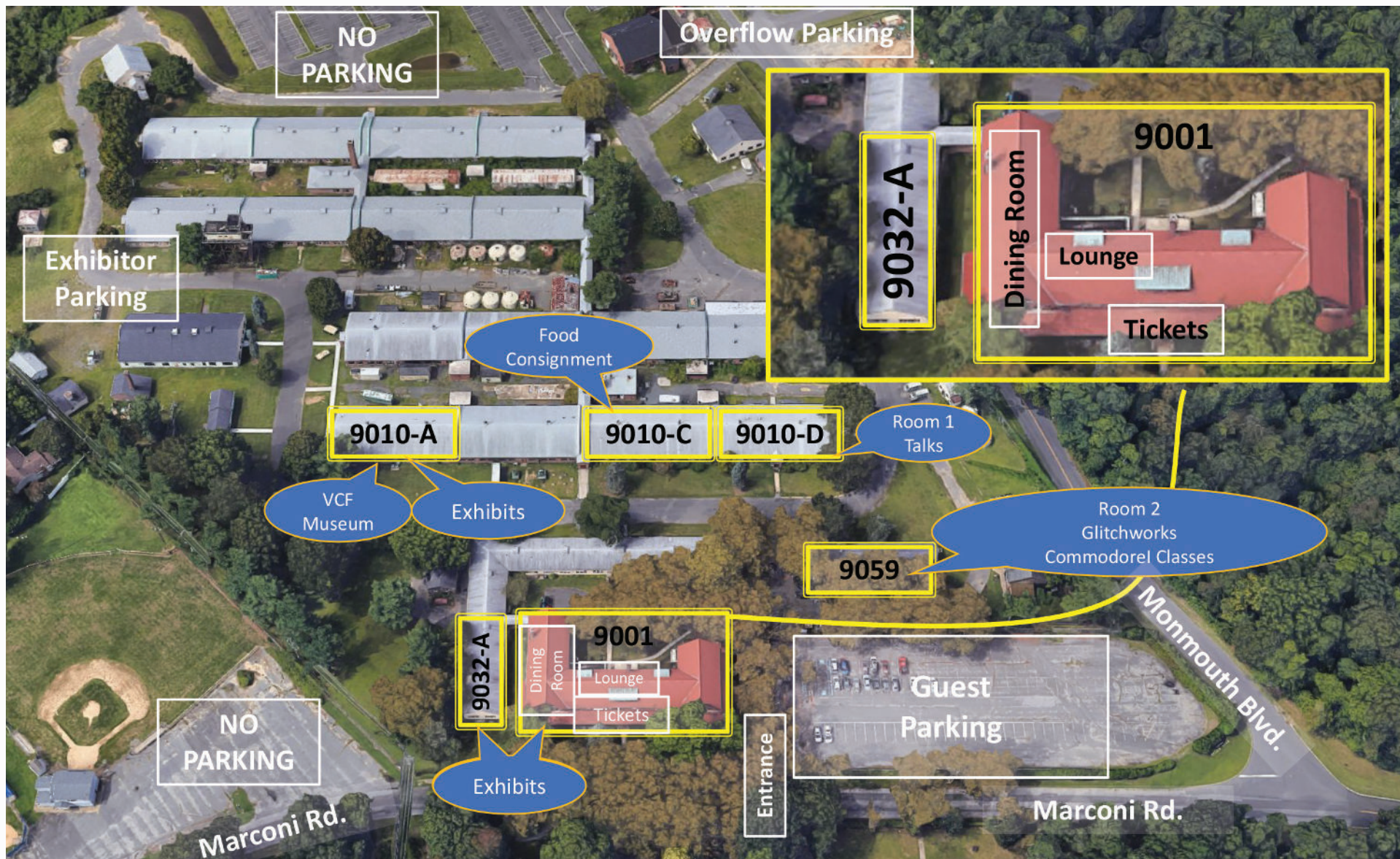
– *Dan FitzGerald, Erica Andrews, Andrea King*

Craft Synthpop Like Its 1991! The Apple II and Macintosh were staples of the digital music scene of the 1980s and 1990s. This exhibit provides a hands-on experience in the tools and techniques used to create MIDI music using a Macintosh Plus. Visitors can use an MIDI keyboard to key notes into the computer, software to assign instrumental "voices" to each track and layer them, listen back on a sound card, and adjust levels on a sound board. A more modern computer can be patched into the soundboard and generate a digital recording that we can provide back to you as an email or on a 1.44M floppy diskette!

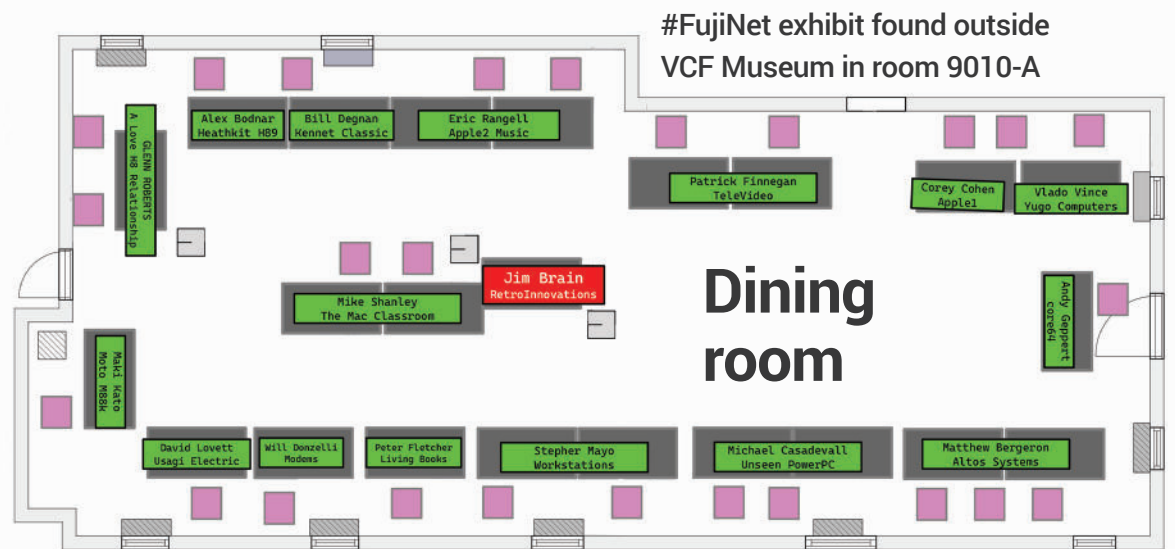
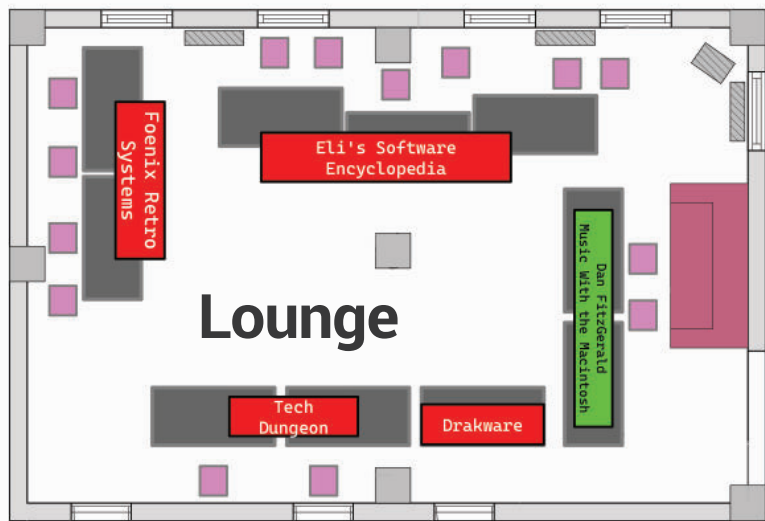
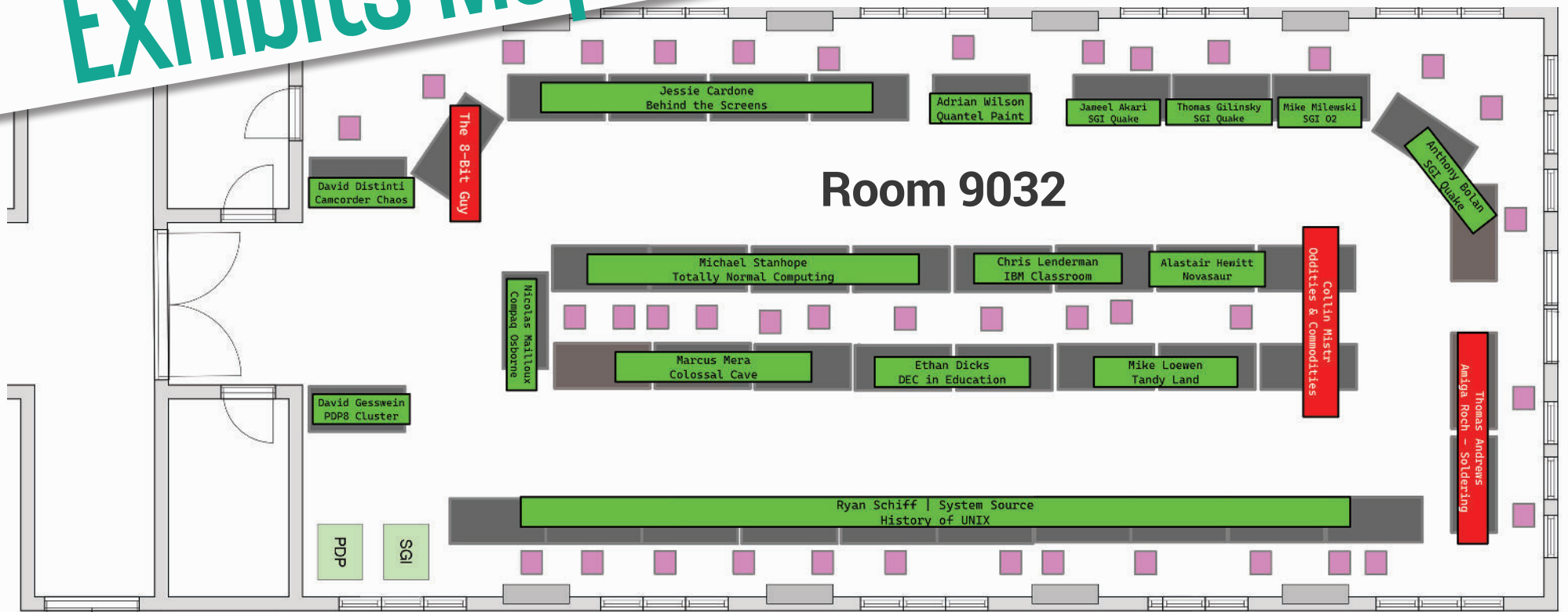
FujiNet - The Modern Age of Vintage Computing – *Jeffrey Piepmeier*

Stop by outside the VCF Museum in room 9010-A to see the latest developments in FujiNet. FujiNet began as a network adapter for Atari 8-bit personal computers and has grown into a multiuse all-purpose peripheral targeting multiple platforms including Coleco Adam, Commodore 64, RC2014, and Apple II. The FujiNet team has been hard at work making the FujiApple more robust and filled with features adding printer, modem and CPM to the lineup of devices. Disk II emulation for WOZ images is in active development. All FujiNet hardware, firmware and software are open source. Not bad for a multifarious gang of hobbyists whose idea of fun is hanging out on Discord pushing commits, flashing ESP32s and rebooting 8-bits.

Campus Map



Exhibits Map





“Keeping Vintage Computing Alive” “Computers in Education”

Welcome to the Vintage Computer Festival East 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 rest of the InfoAge Science and History Museums. Be sure to talk about us online: #vcfeast

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.

We own VCF West, held in California during the first weekend of August at the Computer History Museum. 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/>)

We have monthly repair workshops: <https://vcfed.org/repair-workshops/>

If you are interested in creating your own chapter or festival, please contact us at info@vcfed.org.

Website: vcfed.org | **VCF Forum:** 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>