

Vintage Computer Festival Computer History Museum

August 2, 2026

Kevin Appert & Dave Jaffe



Kevin's Photos









Dave's Photos

Caveat

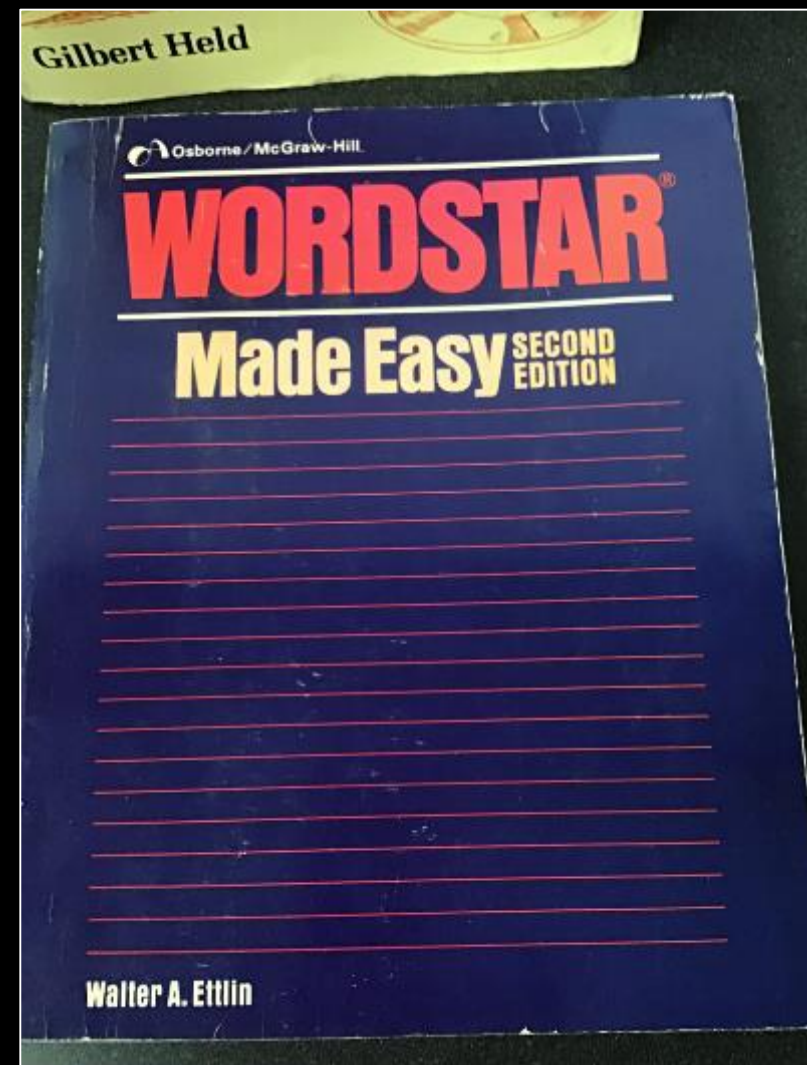
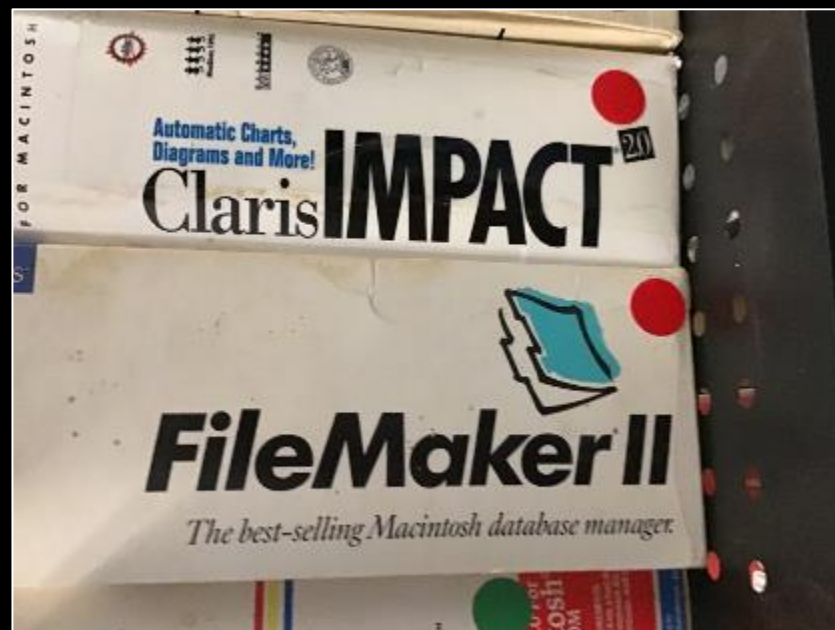
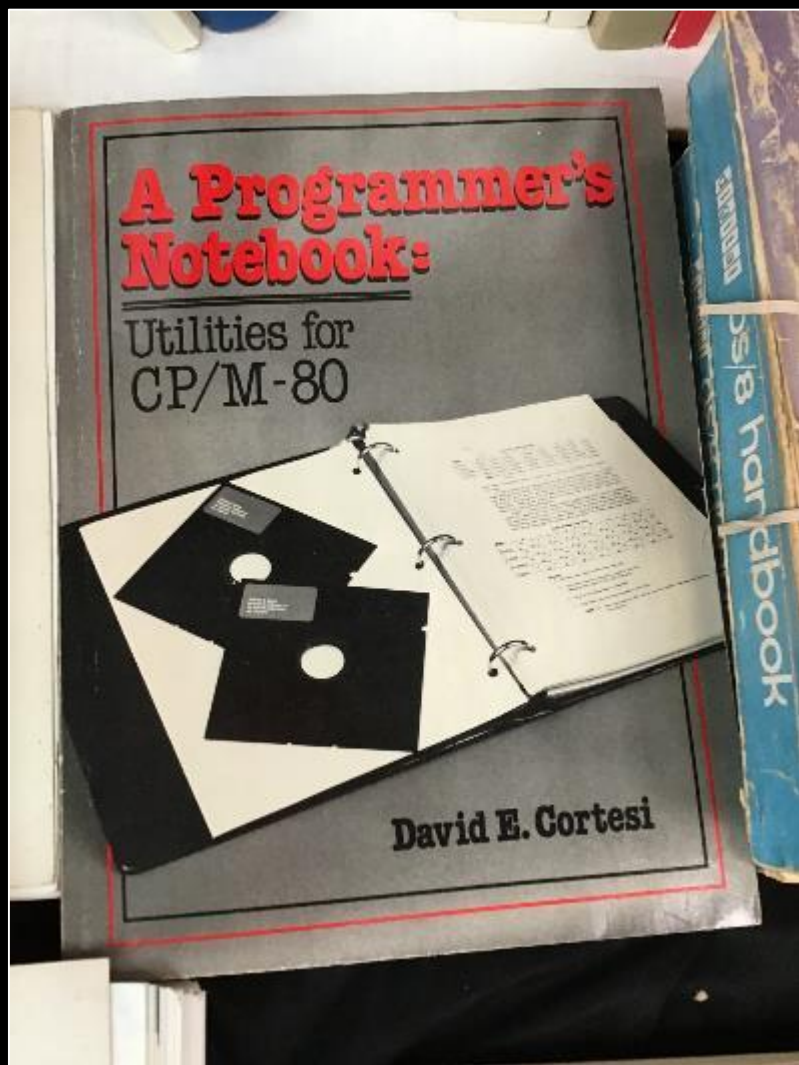
Just because I took a photo of something, that doesn't necessarily mean I know much about the device.

Feel free to add any details you might have.

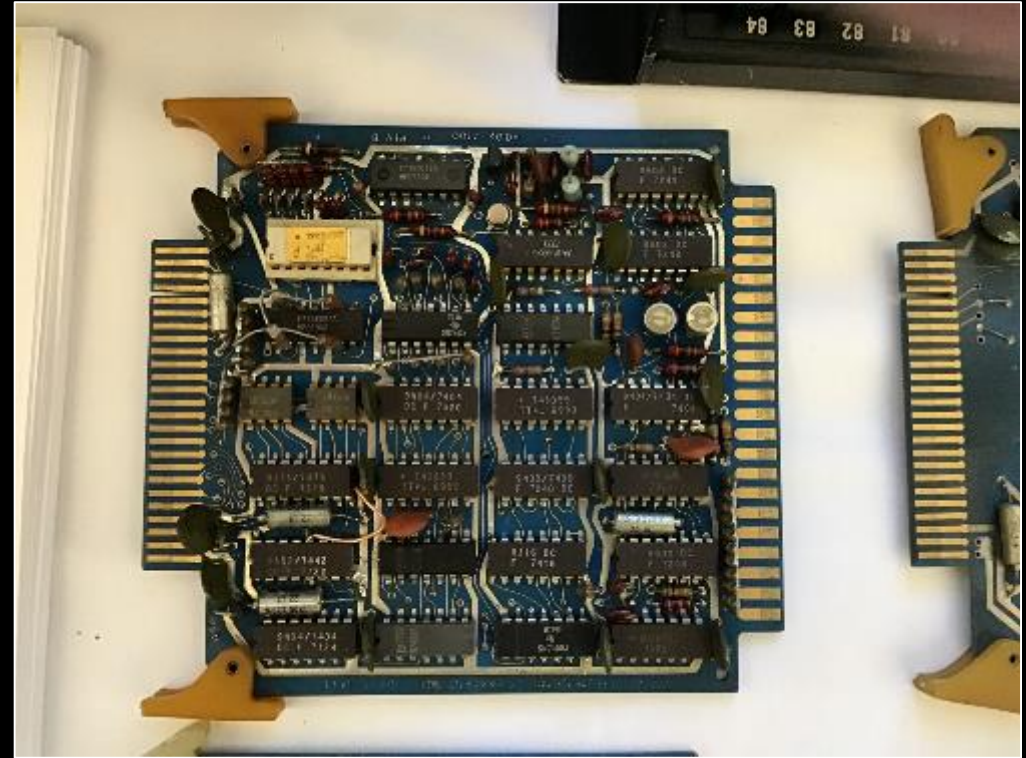
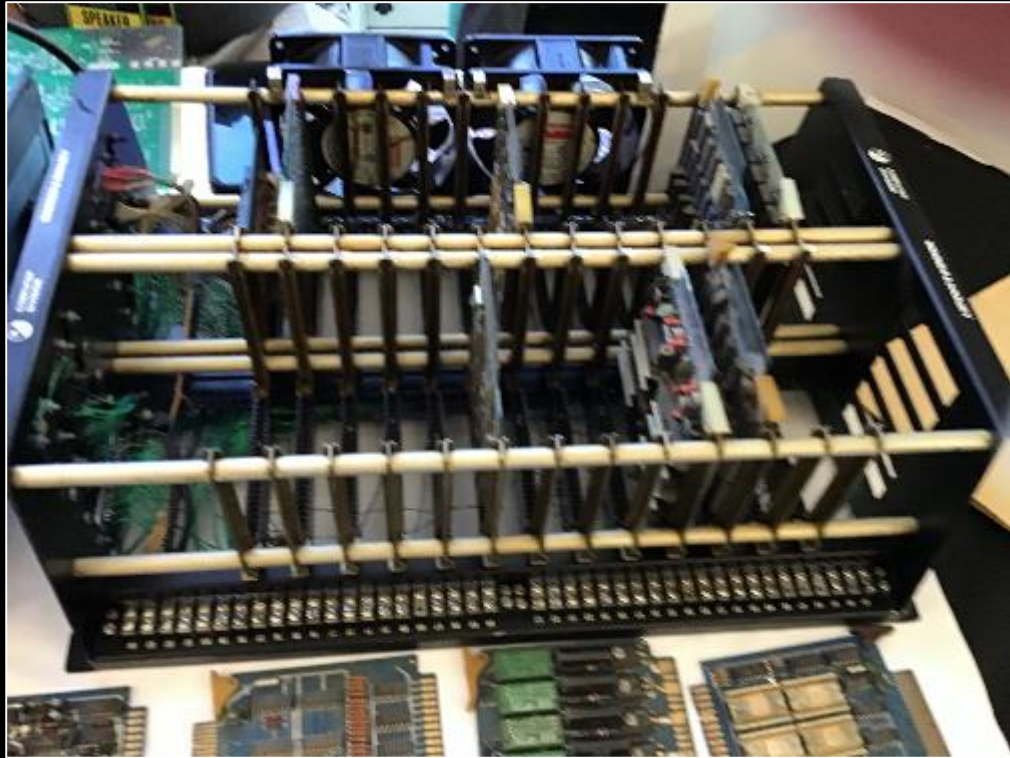


Books & Software





Computers

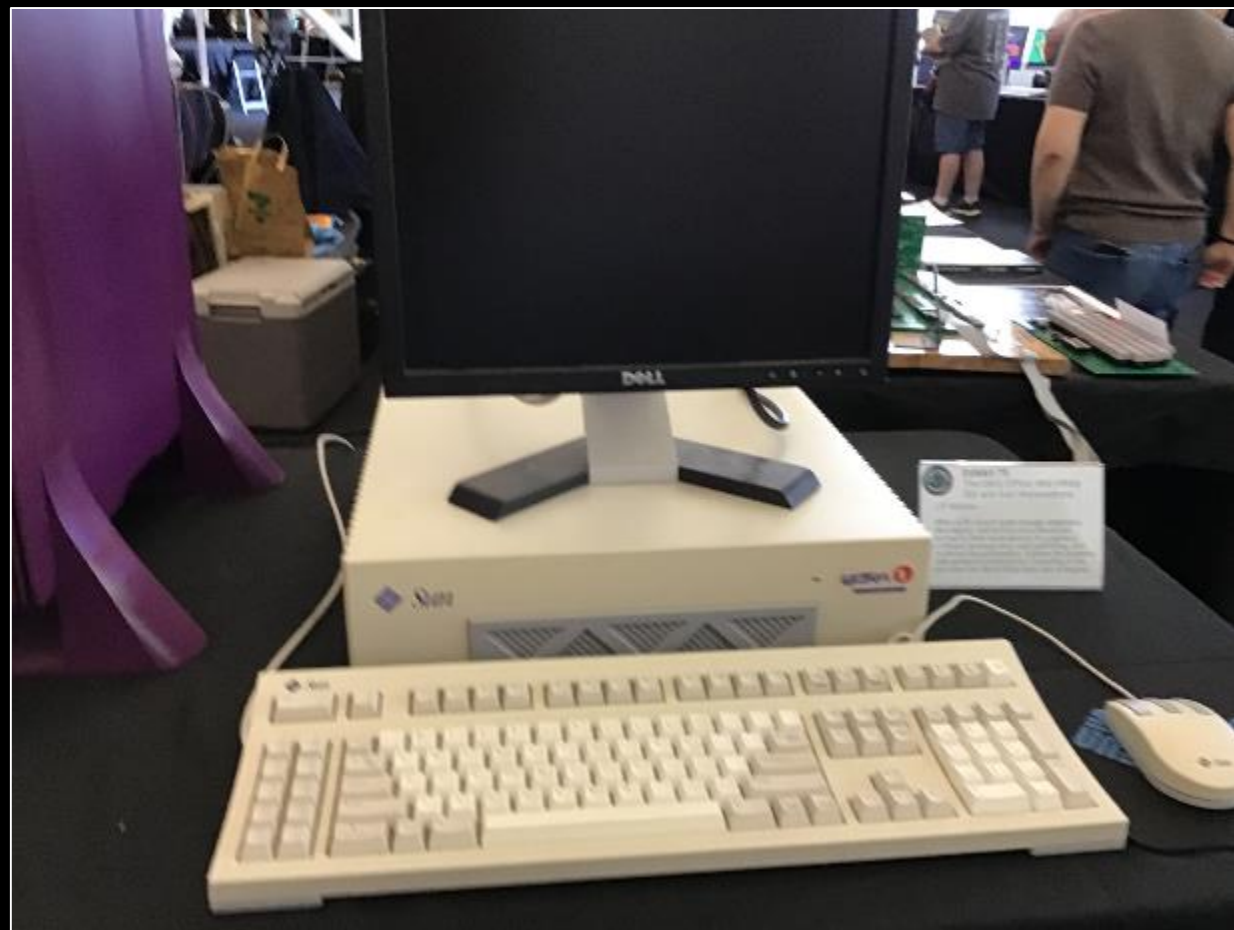














Optional RS-232C
cartridge tape drive
view storage tube with
224 x 768 viewable points
vector not raster display
Built in graphics routines
Two 80M expansion slots
Optional 4052A

FRANKENSTEIN
with **KARLOFF**
A UNIVERSAL PICTURE

**FROM HISTORY
TO YOUR HANDS**



John greets
The greting is locked.

John greets
I don't know the word "lock".

John greets
I don't know the word "unlock".

John greets
What do you want to unlock the greting with?

Inventory
You are carrying:
A pile of bones
A leaflet

John greets with leaflet
Can you unlock a greting with a leaflet?

John says
I don't know the word "can".
✶

IMSAI VDP 80
The Standard of Excellence in Microcomputer Systems.

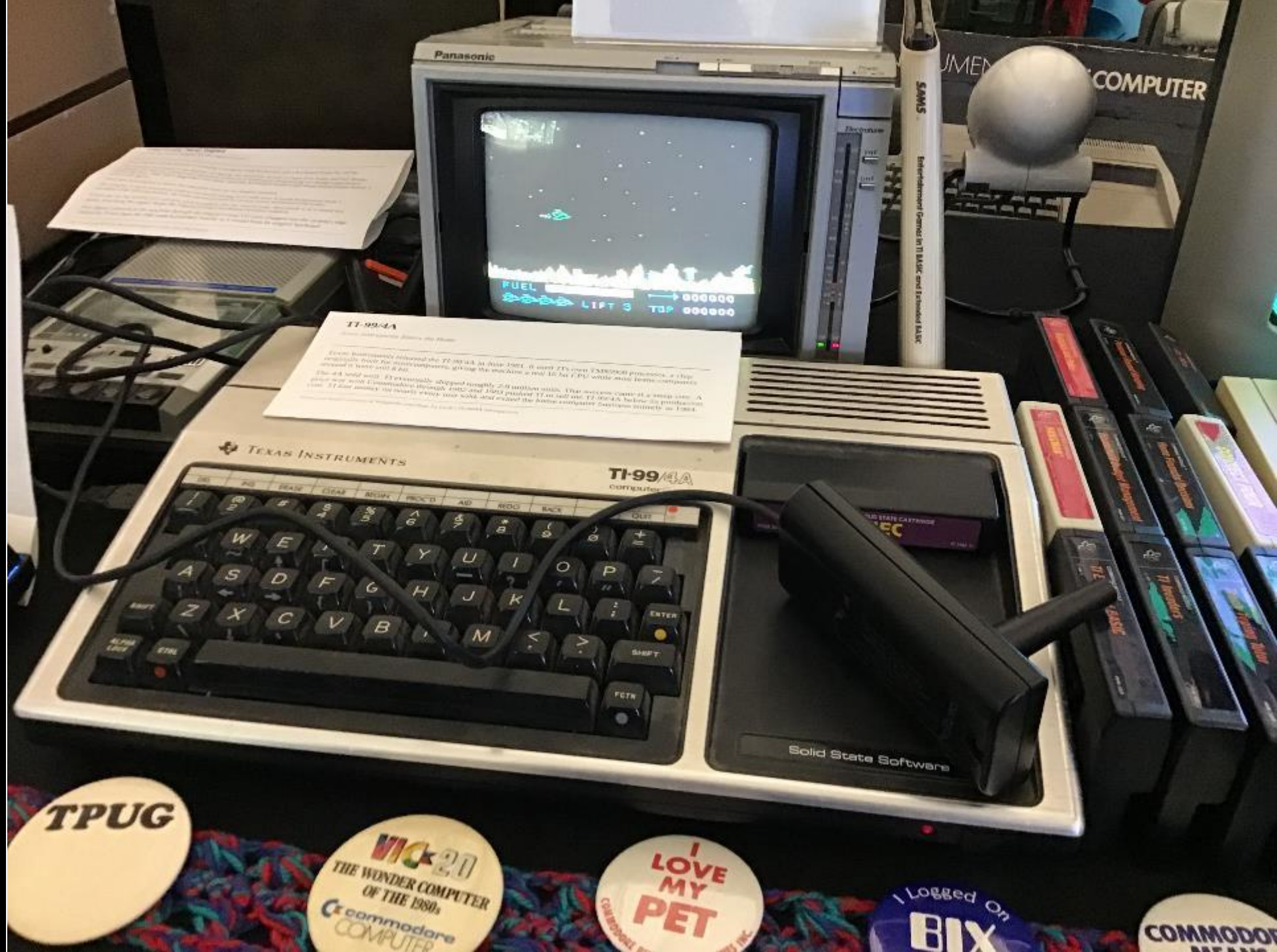












TI-99/4A

From *Computer Games* by Steve Wozniak

Texas Instruments introduced the TI-99/4A in June 1981. It used TI's own TMS9900 processor, a chip designed specifically for microcomputers, giving the machine a real 16-bit CPU while most home computers around it were still 8-bit.

The 4A sold well. It eventually shipped roughly 2.9 million units. The system came at a steep cost. A price war with Commodore through 1982 and 1983 pushed TI to sell the TI-99/4A below its production cost. TI lost money on nearly every unit sold and ended the home computer business entirely in 1984.

TEXAS INSTRUMENTS

TI-99/4A
computer

Solid State Software

TPUG

VIC-20
THE WONDER COMPUTER
OF THE 1980s
Commodore
COMPUTER

I LOVE
MY
PET

I Logged On
BIX

COMMODORE
ART & SIG







ZX81

1	2	3	4	5	6	7	8	9	0
Q	W	E	R	T	Y	U	I	O	P
A	S	D	F	G	H	J	K	L	
SHIFT	Z	X	C	V	B	N	M		



W. OPERATION PLAN RESPONSE

05:07:123 10/10/2010 10:10:10

COMPUTER

UTAH
SED
PED VIDEO

EN EDITOR &
IN
SEMBLED
CE \$650.00



tto

SANYO

GAME OVER
PRESS ANY KEY TO PLAY AGAIN



PROGRAM L

- BASIC (VARIOUS
- SNAKE
- SCRAPPY BIRD
- LIFE
- GOMOKU
- SHOOTING STARS
- ANIMAL
- WUMPUS
- FORTH
- CHES

SCRAPPY BIRD HIGH SCORES

NAME	SCORE
John	11
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John	14
John	15
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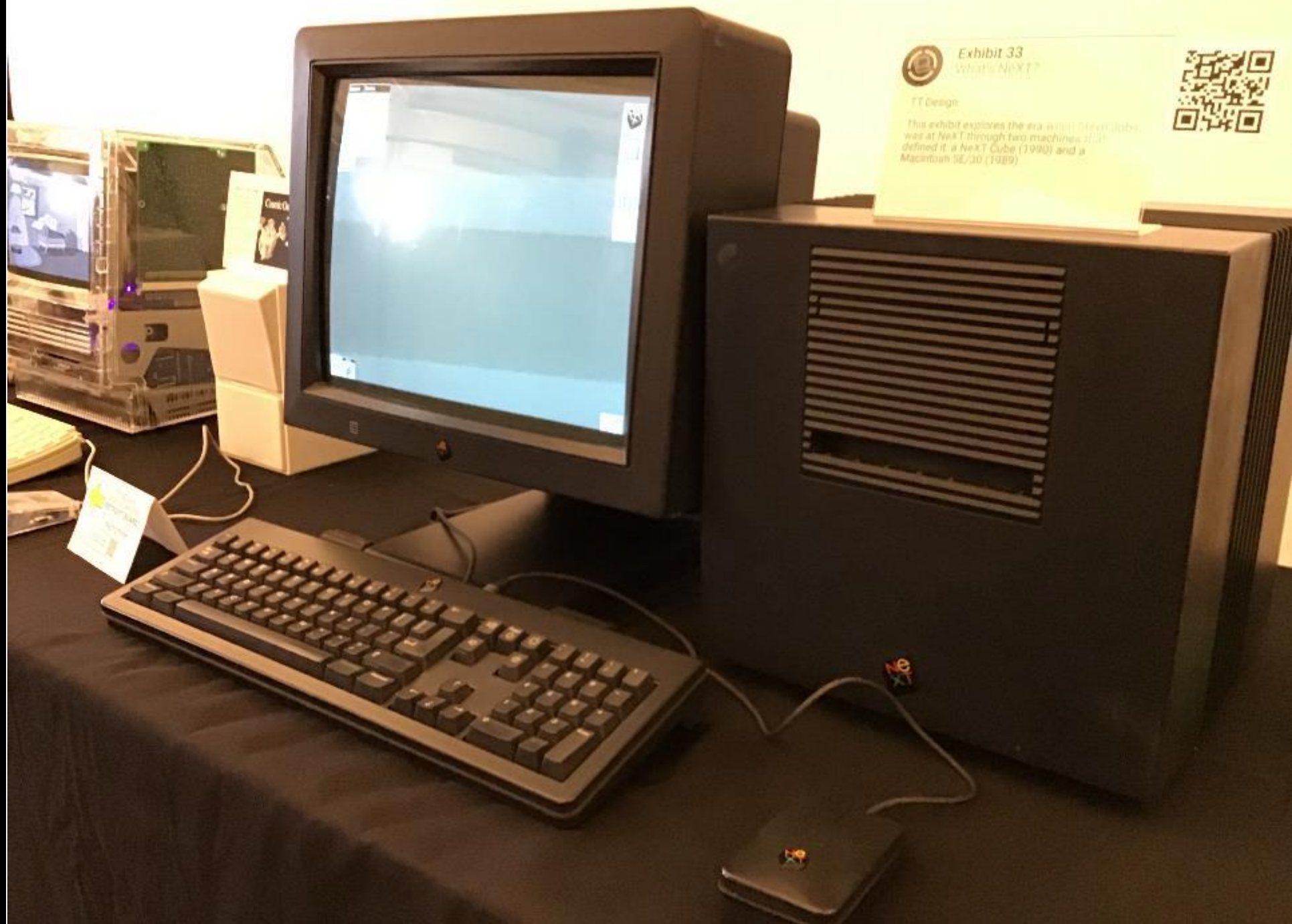


Exhibit 33 What's Next?

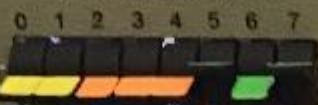
TT Design

This exhibit explores the era when Steve Jobs was at NeXT through two machines that defined it: a NeXT Cube (1990) and a Macintosh SE/30 (1989).



MARK 8 MINICOMPUTER

SWITCH REGISTER



HIGH

LOW

CONTROL REGISTER



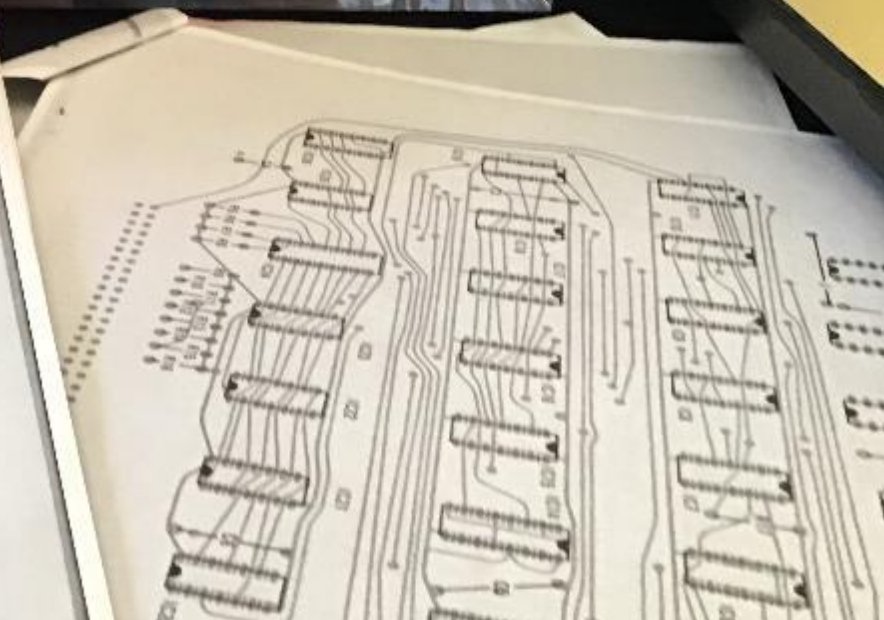
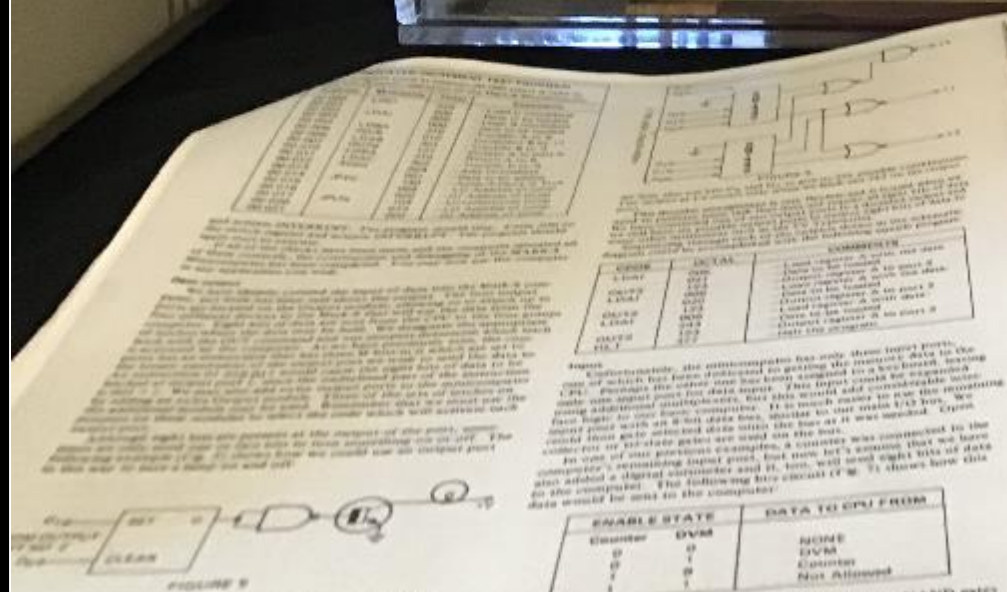
MEM

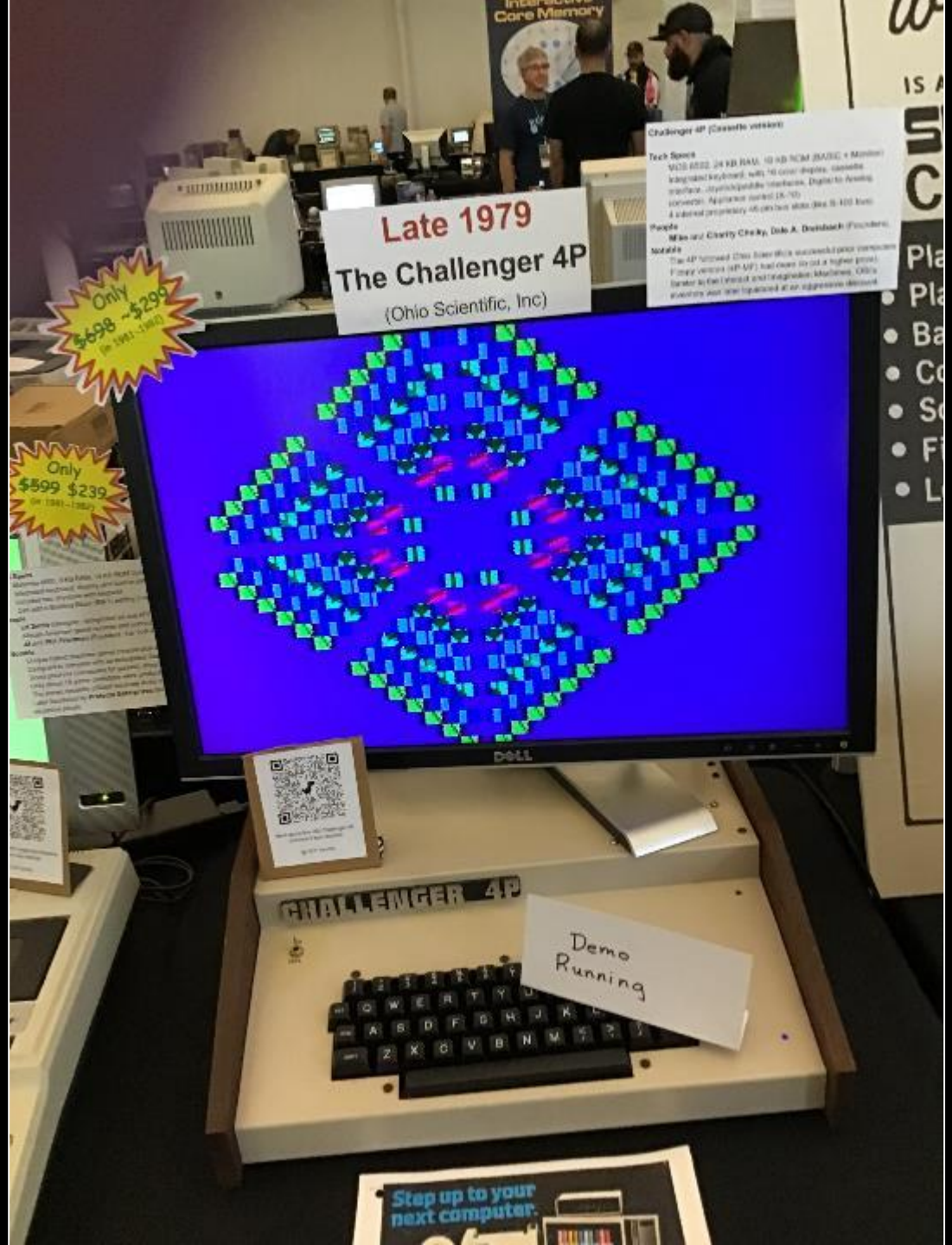
P0

ON

POWER

OFF





Late 1979 The Challenger 4P (Ohio Scientific, Inc)

Challenger 4P (Cassette version)

Tech Specs:
VLSI 8088, 24 KB RAM, 10 KB ROM (BASIC + Monitor), integrated keyboard, built-in color display, cassette interface, asynchronous interface, Digital-to-Analog converter, Application oriented (16-100), 4 internal proprietary software disks (2x 5.25 100 Kbytes).

People:
Mike and Cheryl Cherry, Dale A. Dreibach (President).

Model:
The 4P followed Ohio Scientific's successful price-conscious Pioneer version (4P-MP) but even so it's a higher price. Better to feel smart and sophisticated. Moreover, Ohio Scientific was well-regarded at an aggressive discount.

Only
\$698 ~\$299
(in 1981-1982)

Only
\$599 \$239
(in 1981-1982)

Specs:
Microprocessor: 8088 8088, 16 and 1024 Kbytes (expandable), memory, color display, cassette interface, asynchronous interface, Digital-to-Analog converter, Application oriented (16-100), 4 internal proprietary software disks (2x 5.25 100 Kbytes).

People:
Mike and Cheryl Cherry, Dale A. Dreibach (President).

Model:
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CHALLENGER 4P

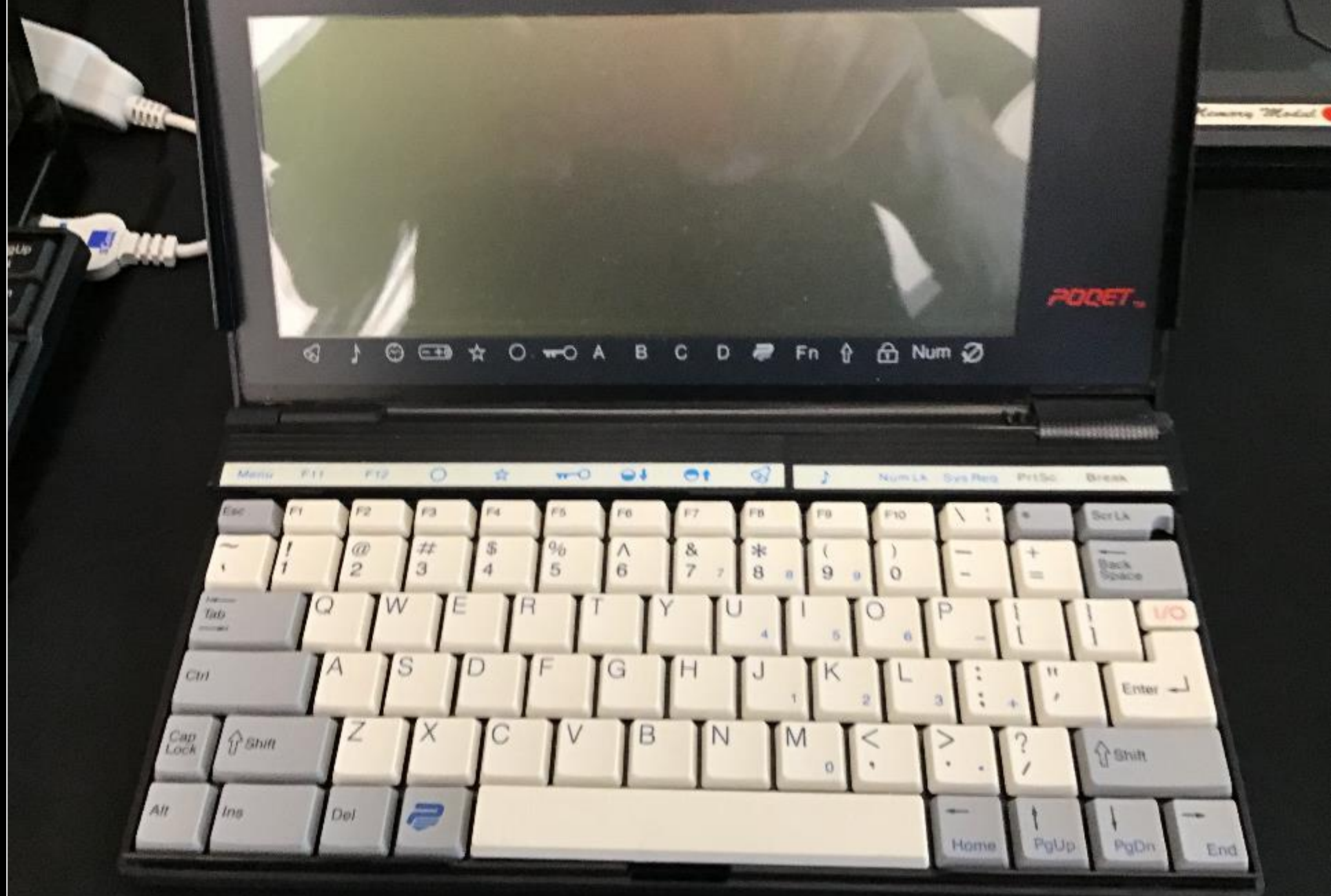
Demo
Running

Step up to your
next computer.

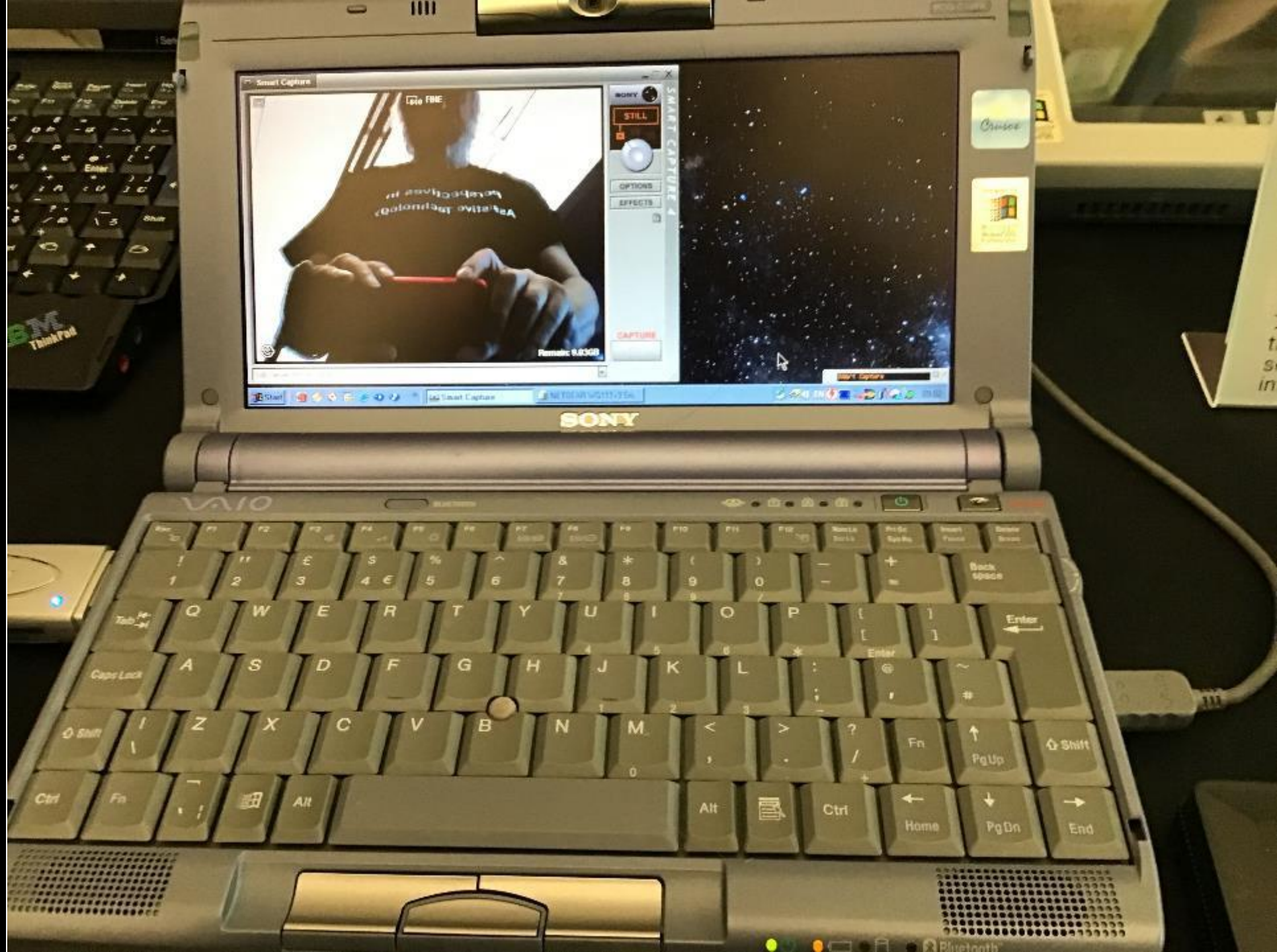
Laptops

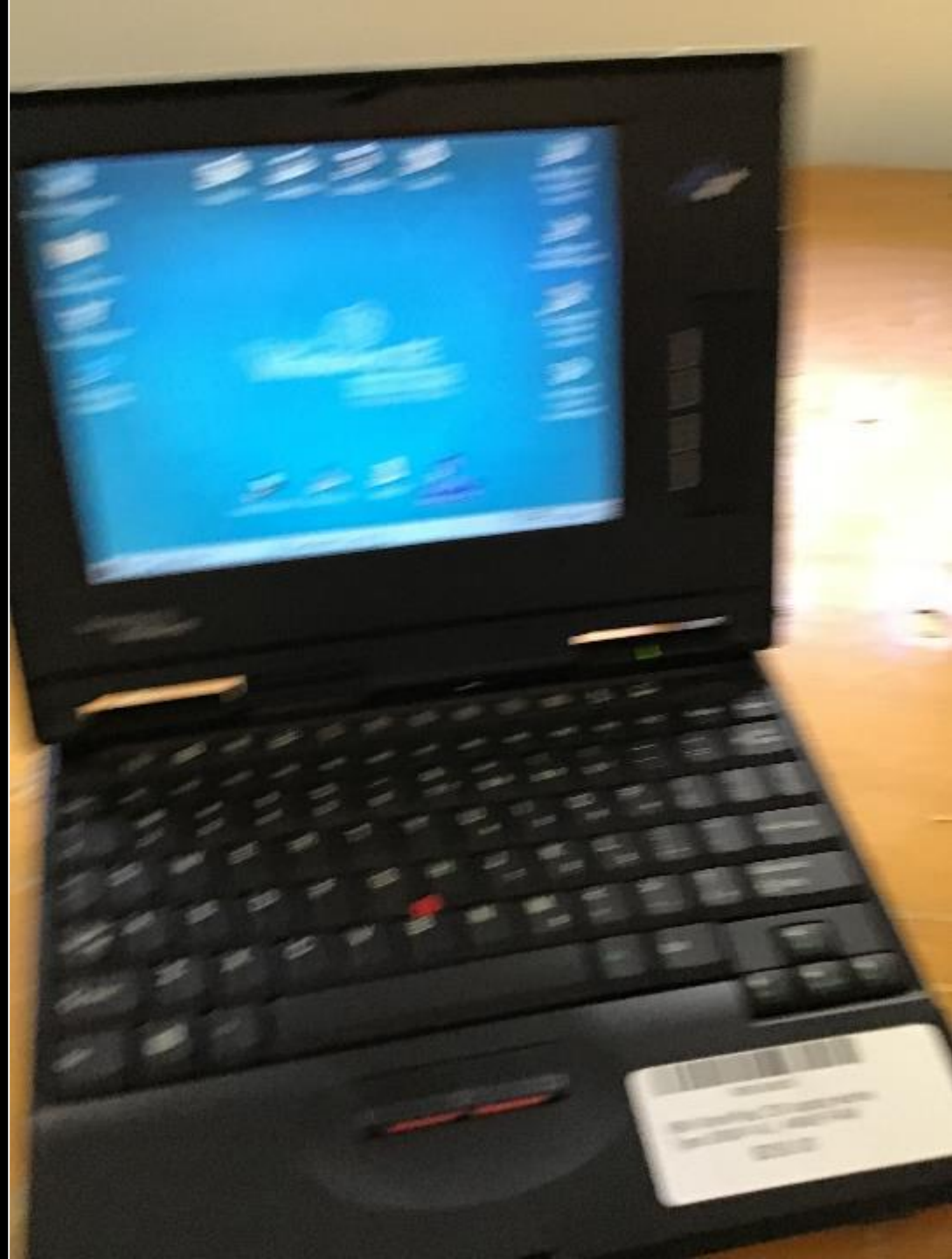










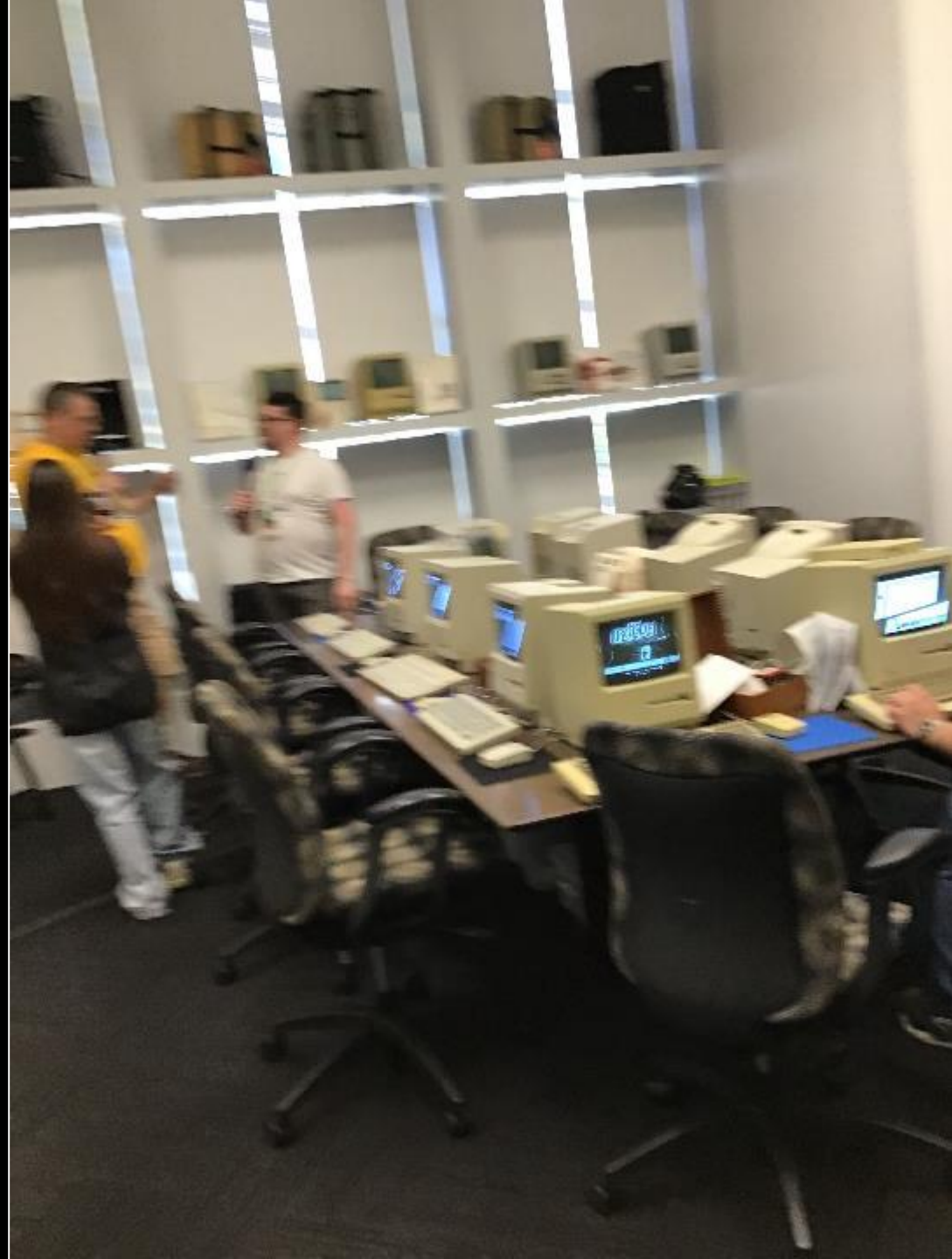


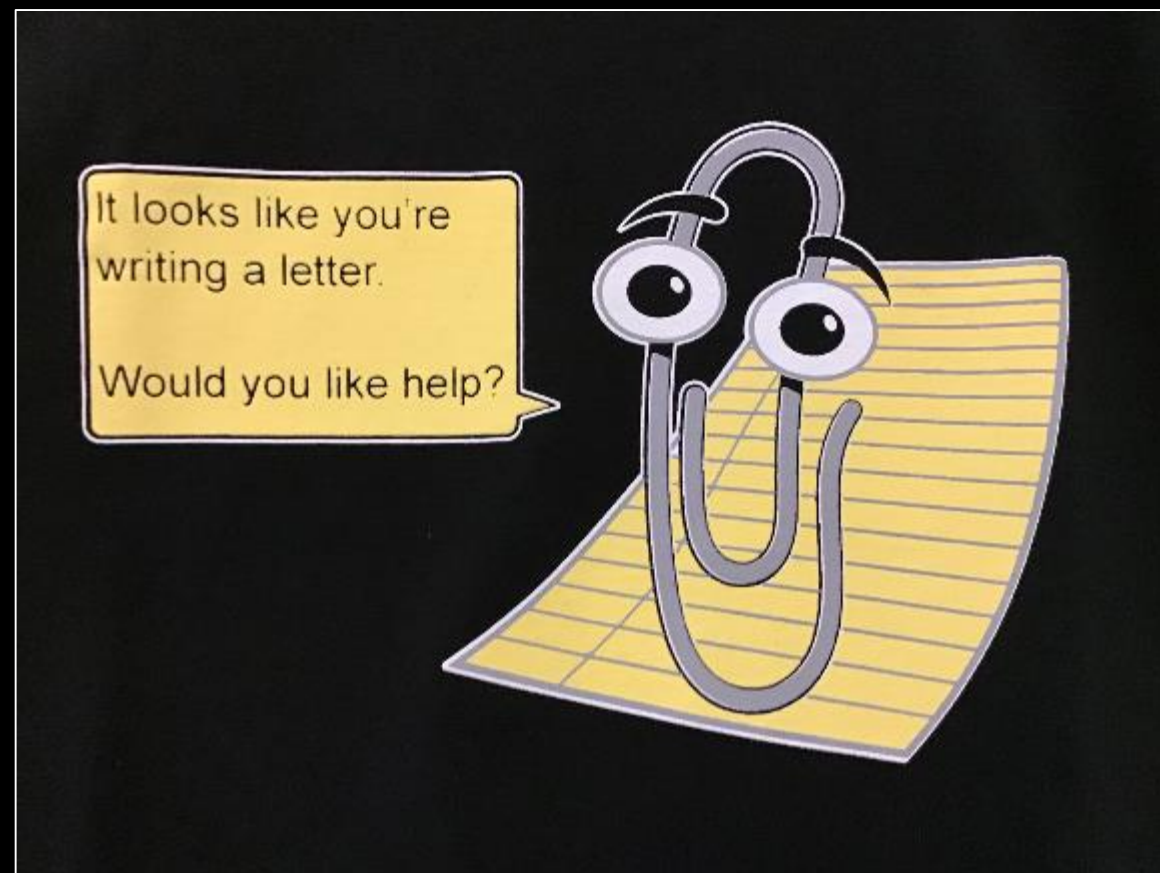




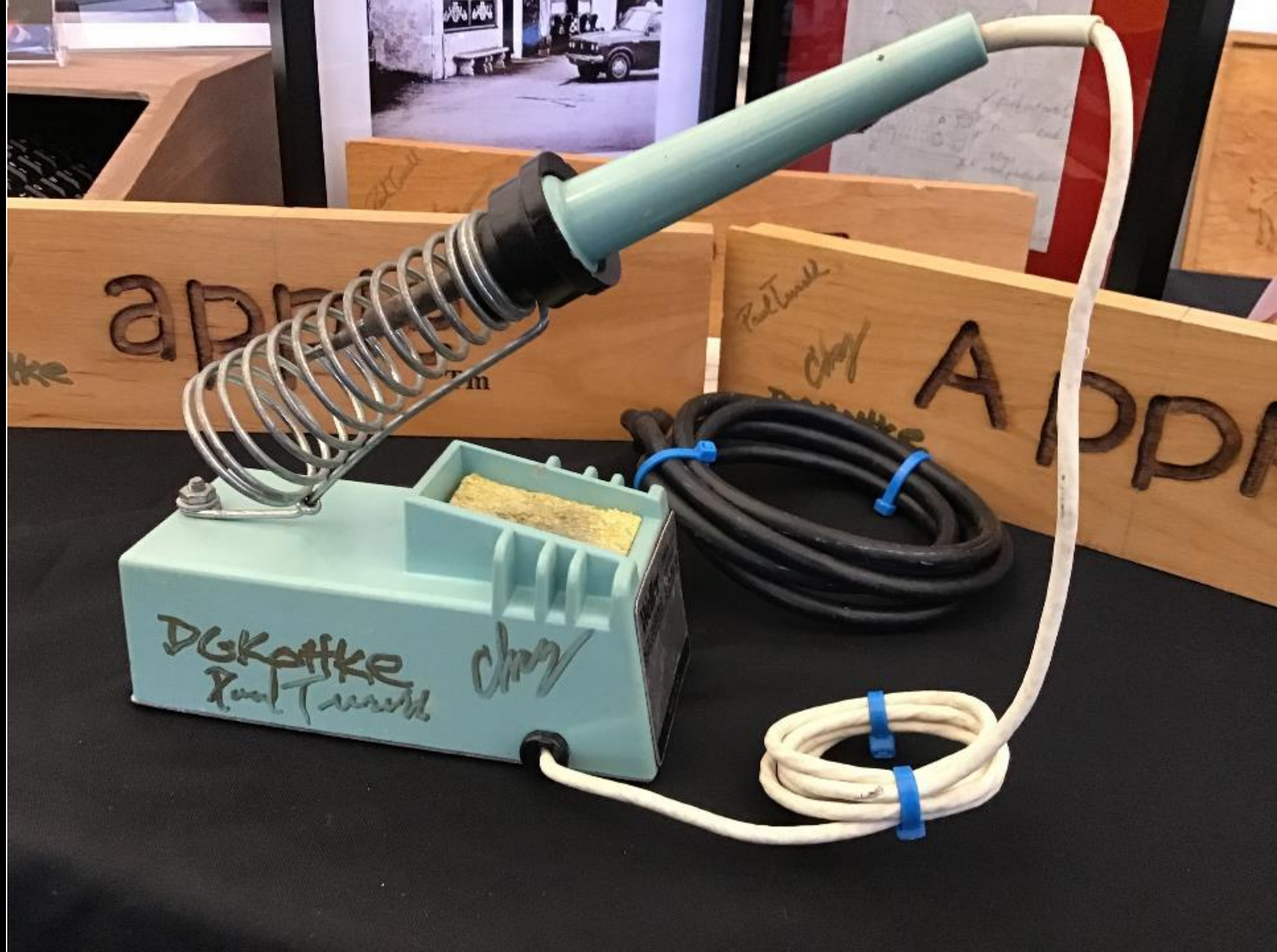


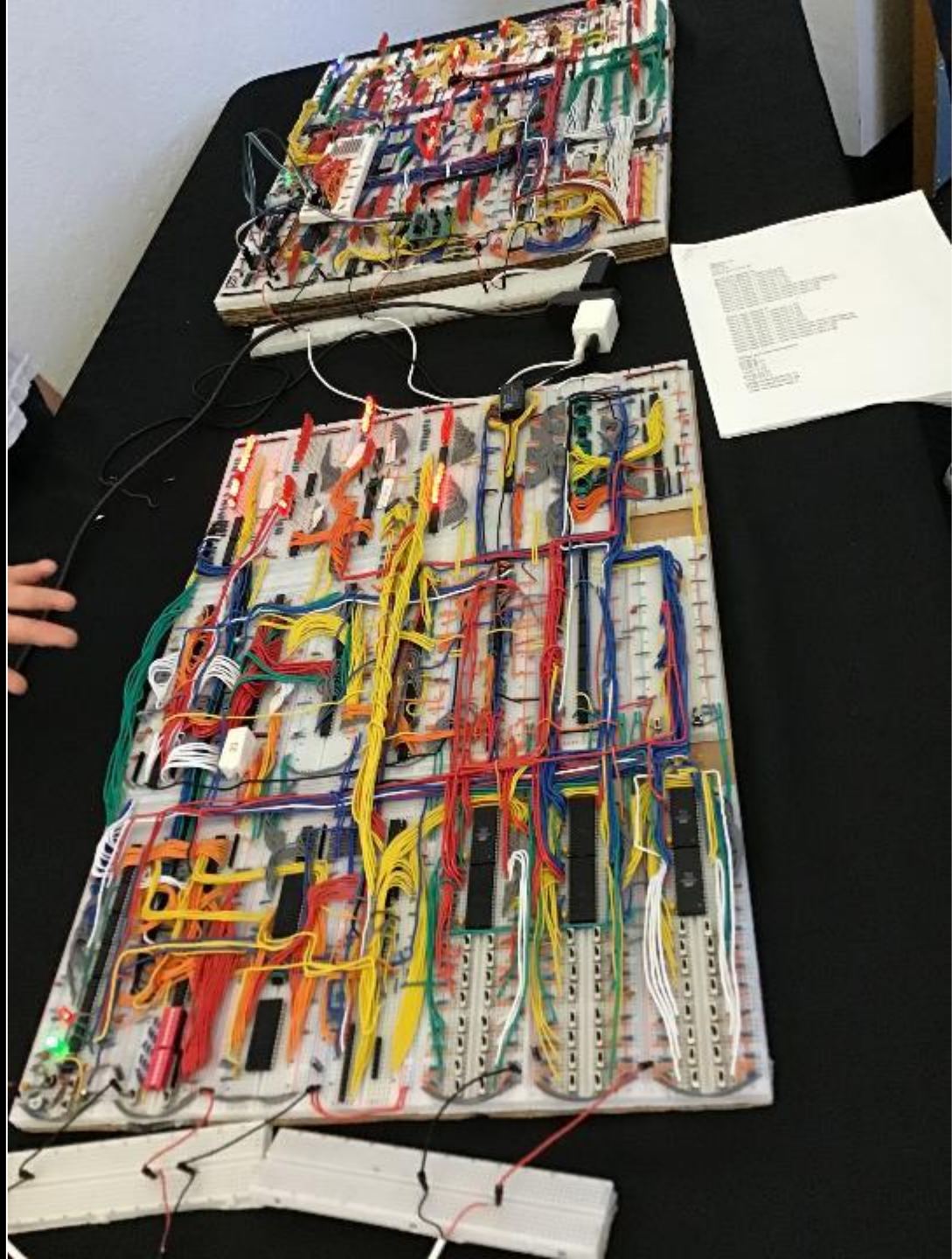
Miscellaneous





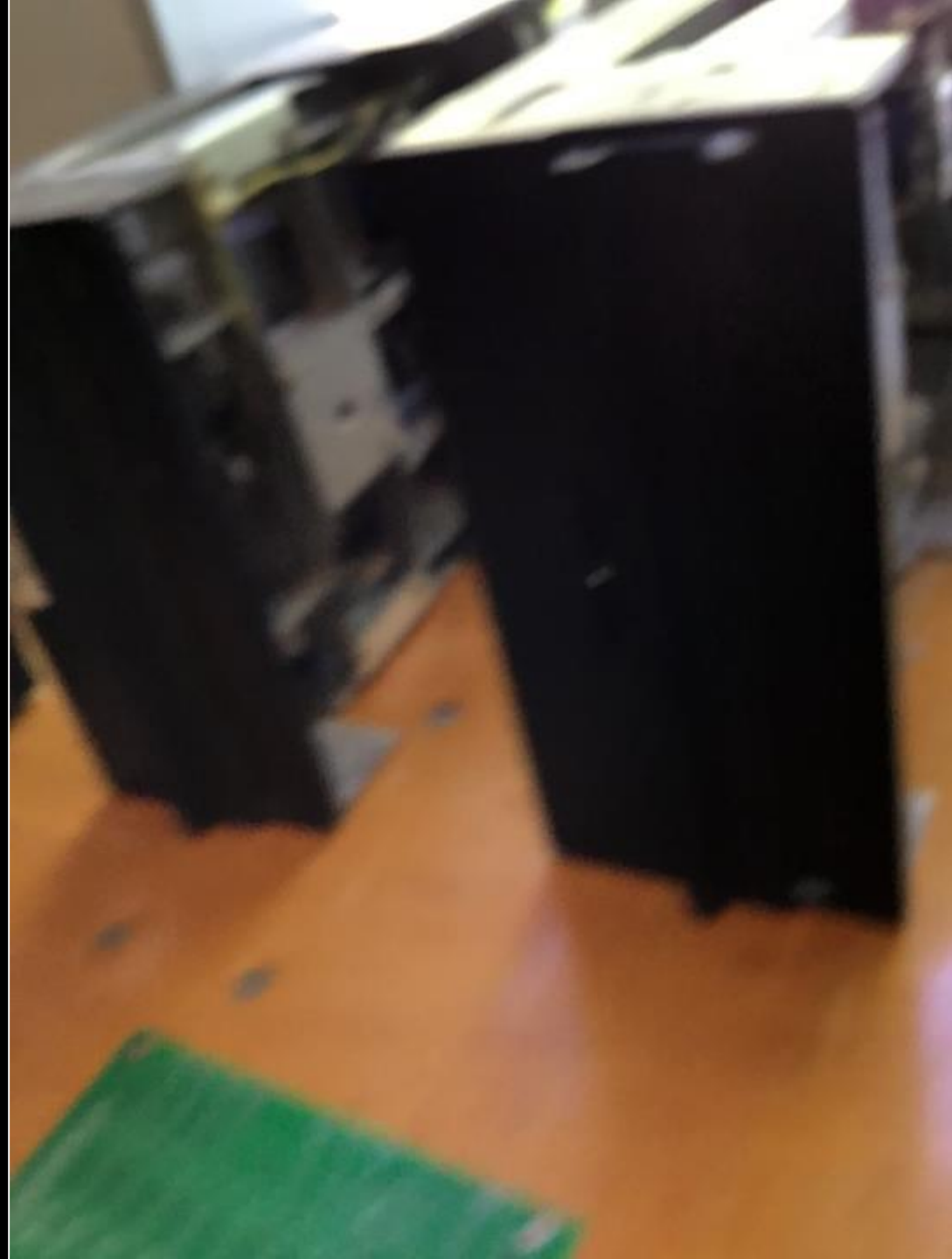








Media







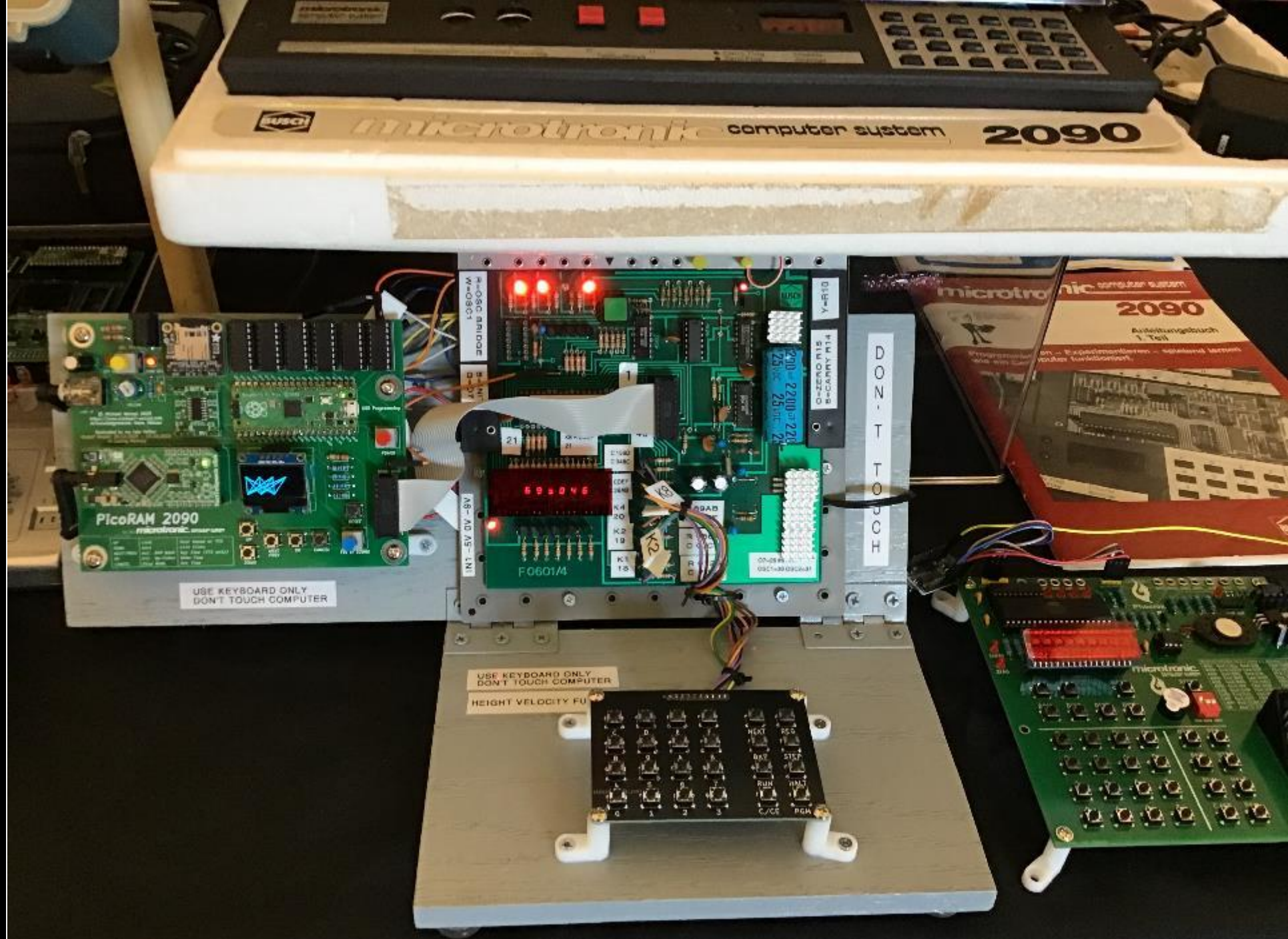




Unidentified







Stemma
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Memory

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ferrite core:

ED Matrix

RGB addressable

Logic Board

Arduino and
MicroPython
Compatible

Magic Wand

Magnetic Tip Stylus

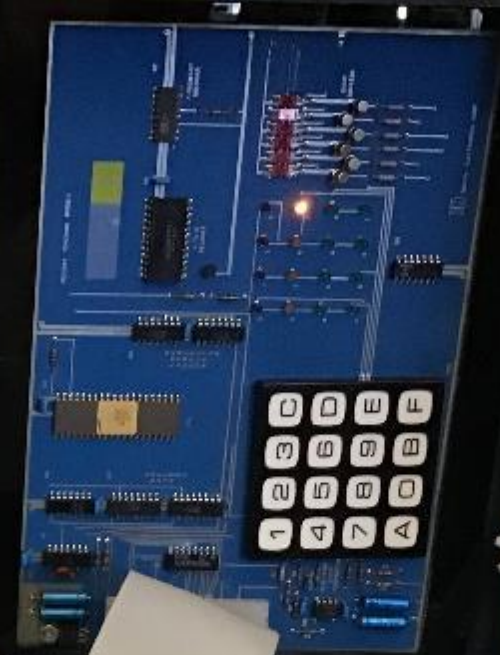
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core
laders

27

1976 Complete Motorola
ased Briefcase Computer

DE68, a fully self-contained
ola 6800 microcomputer
signed and commercially sold
ronics Corporation (DECO) in
amia, during 1976 and 1977



6 WELCOME TO 2026



DE68 - 1976 complete Motorola 6800 based Briefcase computer by DECO, Oakland, CA
Stanley Ruppert — Sunnyvale

DE68, a fully self-contained portable Motorola 6800 microcomputer system was designed and commercially sold by Digital Electronics Corporation (DECO) in Oakland, California, during 1976 and 1977. DECO, founded in 1974 by Roger Doering and colleagues from the University of California at Berkeley, had previously produced an Intel 4004 development system (1974), a Motorola 6800 Exerciser ICE debugger DICE/68 (1975). The introductory DE68 sold for \$3600 in 1976 featuring micro cassette tape storage, an electromechanical printer, a 43-key Chem 4SCII keyboard, and a





APPLE I REPLICA

The computer that started it all. This is a working replica of the Apple I computer, which is based on the original Apple I design. It is a single-board computer that can be used to run a variety of programs. The Apple I was the first computer to be sold as a kit, and it was the first computer to be sold in a wooden case. It was the first computer to be sold in a store, and it was the first computer to be sold in a box. It was the first computer to be sold in a box, and it was the first computer to be sold in a box.

Apple I, 1976
MSRP: \$240
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\$199.99



Announcing Zilog Z-80 microcomputer products.

With the next generation, the battle is joined.

The Z-80: A new generation LSI component set including CPU and I/O Controllers.

The Z-80: Full software support with emphasis on high-level languages.

The Z-80: A floppy disc-based development system with advanced real-time debug and in-circuit emulation capabilities.

The Z-80: Multiple sourcing available now.

Your ammunition: A chip off a new block.



A single chip, N-channel processor arms you with a super-set of 158 instructions that include all of the 8080A's 78 instructions with total software compatibility. The new instructions include 1, 4, 8 and 16-bit operations. And that means less programming time, less paper and less end costs.

And you'll be in command of powerful instructions: Memory-to-memory or memory-to-I/O block transfers and searches, 16-bit arithmetic, 9 types of rotates and shifts, bit manipulation and a legion of addressing modes. Along with this army you'll also get a standard instruction speed of 1.6 μ s and all Z-80 circuits require only a single 5V power supply and a single phase 5V clock. And you should know that a family of Z-80 programmable circuits allow for direct interface to a wide range of both parallel and serial interface peripherals and even dynamic memories without other external logic.

With these features, the Z80-CPU generally requires approximately 50% less memory space for program storage

yet provides up to 500% more throughput than the 8080A. Powerful ammunition at a surprisingly low cost and ready for immediate shipment.

Mighty weapons against an enemy entrenched: The Z-80 development system.

You'll be equipped with performance and versatility unmatched by any other microcomputer development system in the field. Thanks to a floppy disc operating system in alliance with a sophisticated Real-Time Debug Module.

The Zilog battalion includes:

- Z80-CPU Card.
- 18K Bytes of RAM Memory, expandable to 60K Bytes.
- 4K Bytes of ROM/RAM Monitor software.
- Real-Time Debug Module and In-Circuit Emulation Module.
- Dual Floppy Disc System.
- Optional I/O Ports for other High Speed Peripherals are also available.
- Complete Software Package including Z-80 Assembler, Editor, Disc Operating System, File Maintenance and Debug.



On standby: Software support.

All this is supported by a contingent of software including: resident microcomputer software, time sharing programs, libraries and high-level languages such as PL/Z.

On standby: User support.

Zilog conducts a wide range of strategic meetings and design oriented workshops to provide the know-how required to implement the Z-80 Microcomputer Product line into your design. All hardware, software and the development system are thoroughly explained with "hands-on" experience in the classroom. Your Zilog representative can provide you with further details on our user support program.



Reinforcements: A reserve of technological innovations.

The Zilog Z-80 brings to the battlefield new levels of performance and ease of programming not available in second generation systems. And while all the others busy themselves with overtaking the Z-80, we're busy on the next generation—continuing to demonstrate our pledge to stay a generation ahead.

The Z-80's troops are the specialists who were directly responsible for the development of the most successful first and second generation microprocessors. Nowhere in the field is there a corps of seasoned veterans with such a distinguished record of victory.

Signal us for help. We'll dispatch appropriate assistance.



Zilog MICROCOMPUTERS

170 State Street, Los Altos, California 94022
(415) 941-5055/TWX 910-370-7965

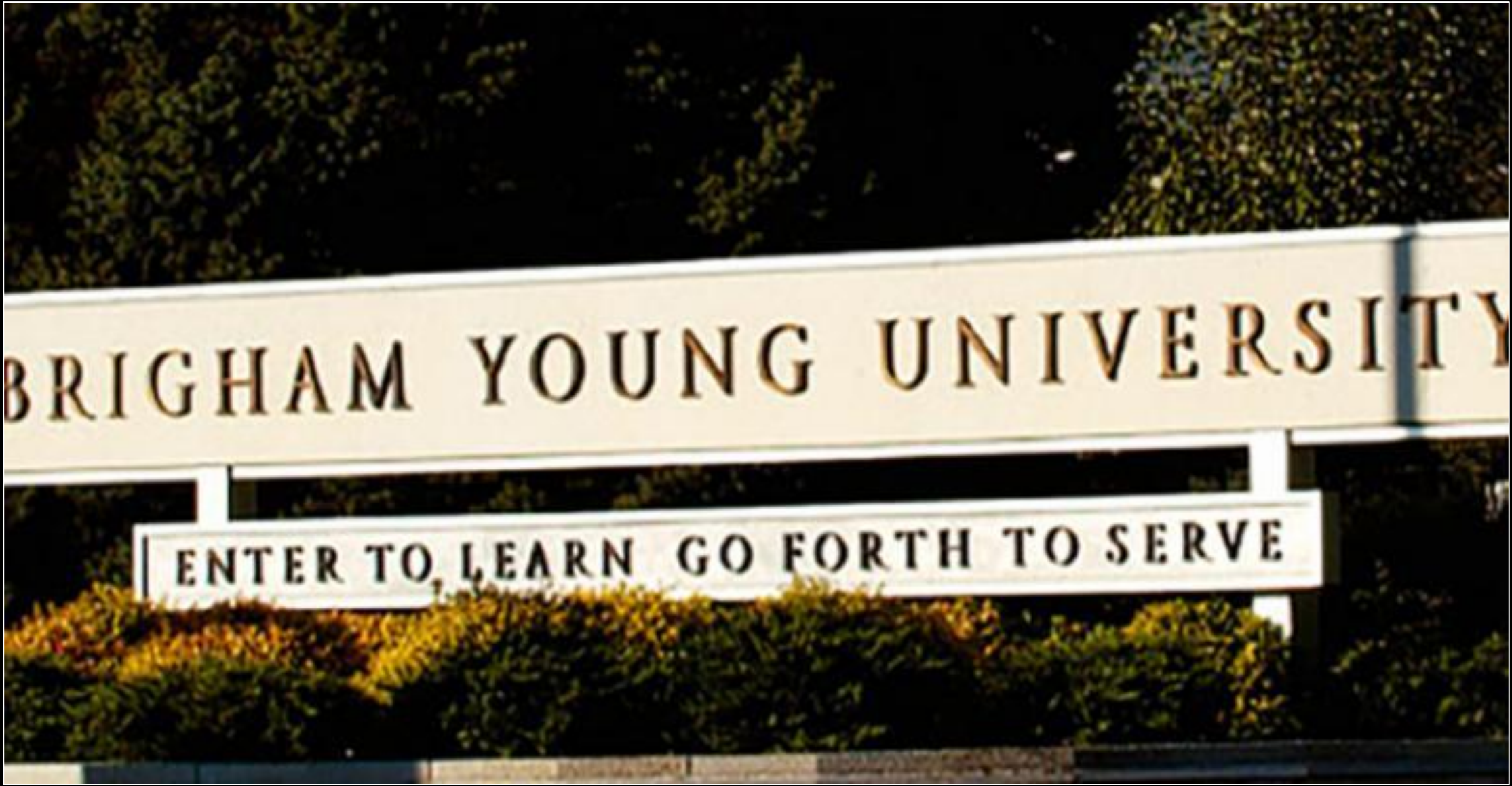
AN AFFILIATE OF **EXXON** ENTERPRISES INC.

CIRCLE NUMBER 8

50th Anniversary of Z80!



Forth?

A photograph of a large, white, three-dimensional sign for Brigham Young University. The sign is composed of two horizontal panels. The top panel is wider and features the university's name in large, gold-colored, serif capital letters. The bottom panel is narrower and contains the university's motto in black, sans-serif capital letters. The sign is set against a background of green trees and foliage. The lighting suggests it is daytime.

BRIGHAM YOUNG UNIVERSITY

ENTER TO LEARN GO FORTH TO SERVE