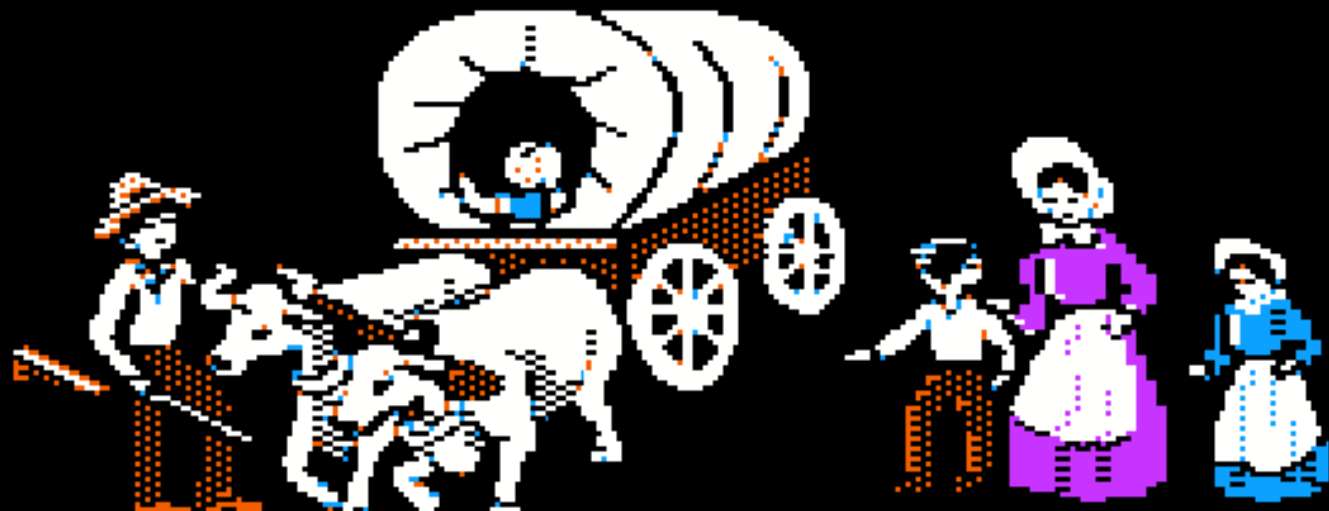




Off The Beaten  
Oregon Trail:  
An After-School  
Special





What are the first names of the four other members in your party?

1. SARAH
2. BRIAN
3. CHRIS
4. DENNIS
5. KEN

(Enter names or press Return)



Sarah W.



H-4



VOLTAGE-CURRENT-  
RESISTANCE  
*Lesson AEH-4A*



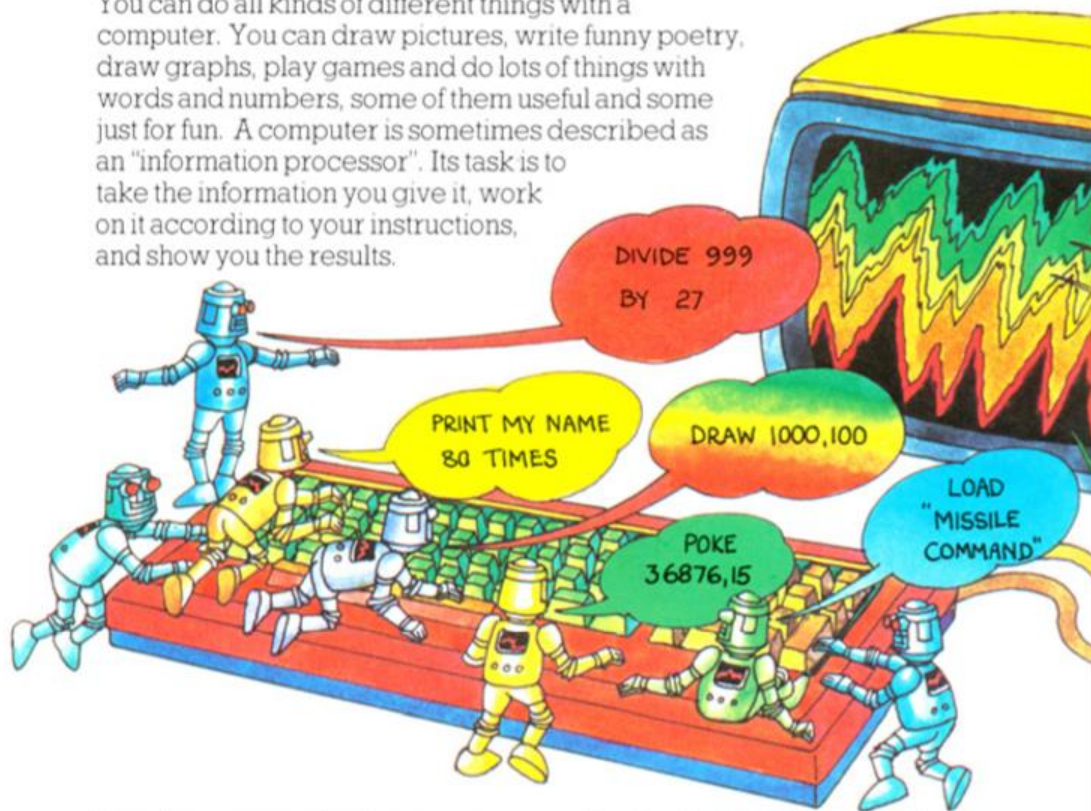
**DeVRY Technical Institute**  
4141 W. Belmont Ave., Chicago 41, Illinois  
*Formerly DeFOREST'S TRAINING, INC.*

AEH-4A



## How a computer works

You can do all kinds of different things with a computer. You can draw pictures, write funny poetry, draw graphs, play games and do lots of things with words and numbers, some of them useful and some just for fun. A computer is sometimes described as an "information processor". Its task is to take the information you give it, work on it according to your instructions, and show you the results.



To make a computer do what you want you have to give it very precise instructions. A list of instructions for a computer is called a program\* and the information you give the computer to

work on is called data. The program has to be written in a language, such as BASIC, that the computer can understand, and it must follow all the rules of the language too.

A look at current  
instructional design  
and education trends  
through the lens of  
the Apple II

You can and must understand computers NOW.

# COMPUTER

COMPUTER LIB



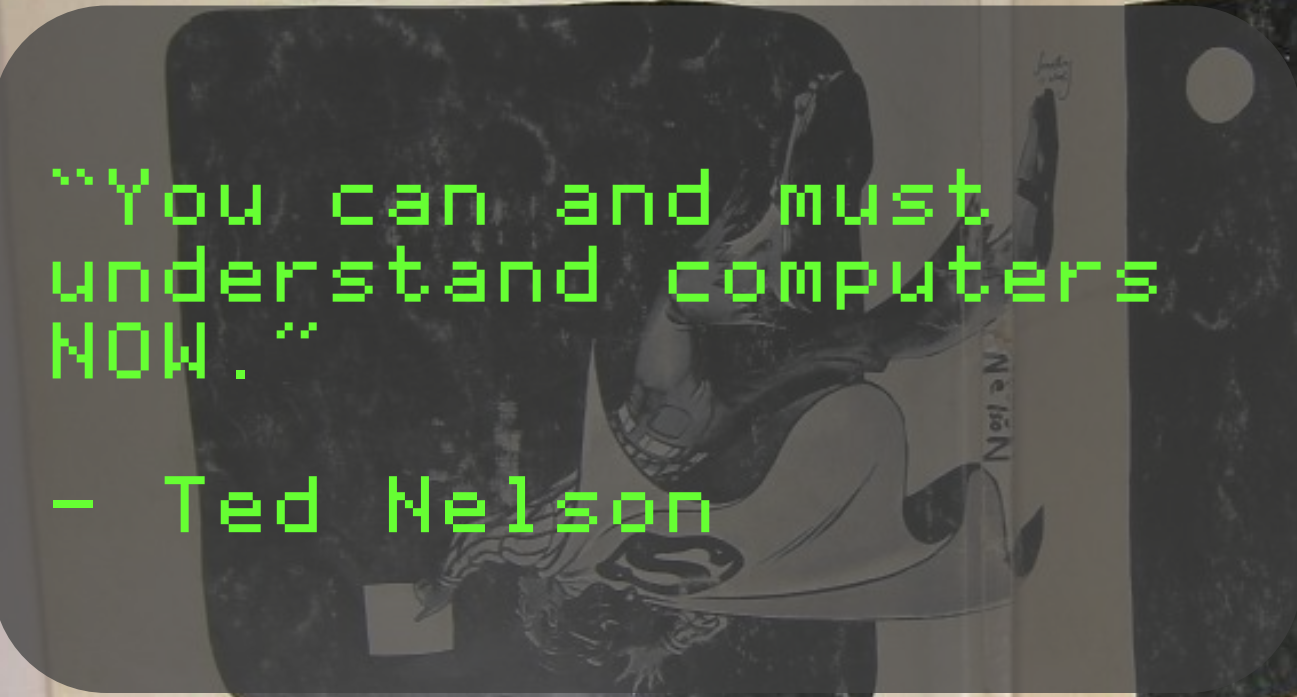
LIB

New Freedoms Through Computer Screens — a Minority Report

This is the flip side of Computer Lib.

"You can and must understand computers NOW."

- Ted Nelson



ed

LIB





---

# the oregon trail

instructional computing courseware  
for the **apple® II** computer

Original Learning  
Objectives:

(A Sampling)

# Social Studies

After using this courseware, the student should be able to develop decision-making skills by learning to:

- consider alternative solutions;
- consider the consequences of each solution;
- make and justify decisions;
- act, based on those decisions

# Interesting points about Oregon Trail

- Suitable for kids from grade school to high school
- Can be adapted with supporting activities for each age range
- Was originally presented as a "simulation"
- Is based on research

( cont... )

- The holy grail of instructional design is to get learners to remember something after they learned it.
- While the quality of what was specifically learned is debatable, many still remember this game DECADES later!

(cont...)

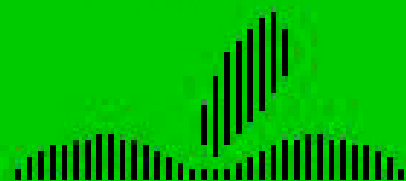
Name a current instructional tool or piece of software that does this...

Other  
Instructional  
Design Examples

Apple  
Presents...  
apple



Apple presents...

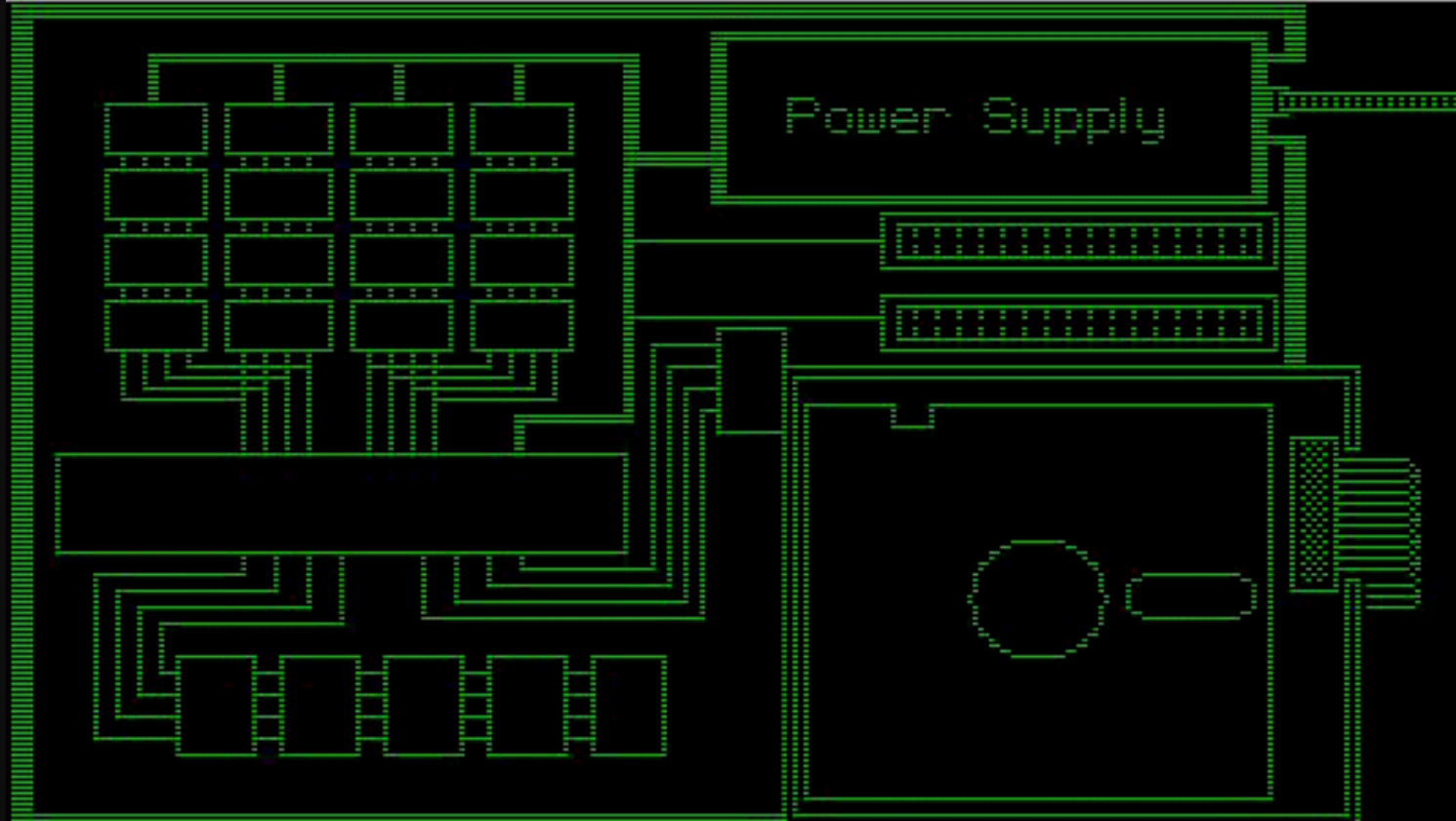


## Apple Presents... apple

- Friendly, scaffolded introduction
- Introduces the hardware and software

# AppleII - The Inside Story

- Infographics!
- Teaches with storytelling!
- Gamification!
- Formative and summative learning!



Sure. First, I put a startup disk in the disk drive and turned on the computer.

LOAD

???????

MODIFY

START UP

**CREATE**

MODIFY

SAVE

LOAD

MASTER

???????

???????

```

XXXXXXXXXXXXXXXXXXXXXXXXX
X                                                                    X
X                                                                    X
X                                                                    X
X                                                                    X
X  Which way? ■                                                    X
X                                                                    X
X                                                                    X
X                                                                    X
X                                                                    X
X                                                                    X
XXXXXXXXXXXXXXXXXXXXXXXXX

```

<<\*>>

START UP

CREATE

SAVE



# Lemonade Stand

COPYRIGHT 1979

APPLE COMPUTER INC.

# Lemonade Stand

- Another simulation!
- Learn about entrepreneurship!
  - and economics
  - and capitalism!
  - and a teeny bit about the impact of weather on capitalism...

ON DAY 1, THE COST OF LEMONADE IS \$.02

LEMONADE STAND 1                      ASSETS \$2.00

HOW MANY GLASSES OF LEMONADE DO YOU  
WISH TO MAKE ?15



## LEMONSVILLE DAILY FINANCIAL REPORT ##

DAY 1

STAND 1

15 GLASSES SOLD

\$.05 PER GLASS

INCOME \$.75

15 GLASSES MADE

2 SIGNS MADE

EXPENSES \$.60

PROFIT \$.15

ASSETS \$2.15

PRESS RETURN TO CONTINUE, ESC TO END



# Spy's Adventures in N. America

- Geography
- Deductive reasoning
- Learn about other places and cultures



Agent MARK: the Midwest

>Look here

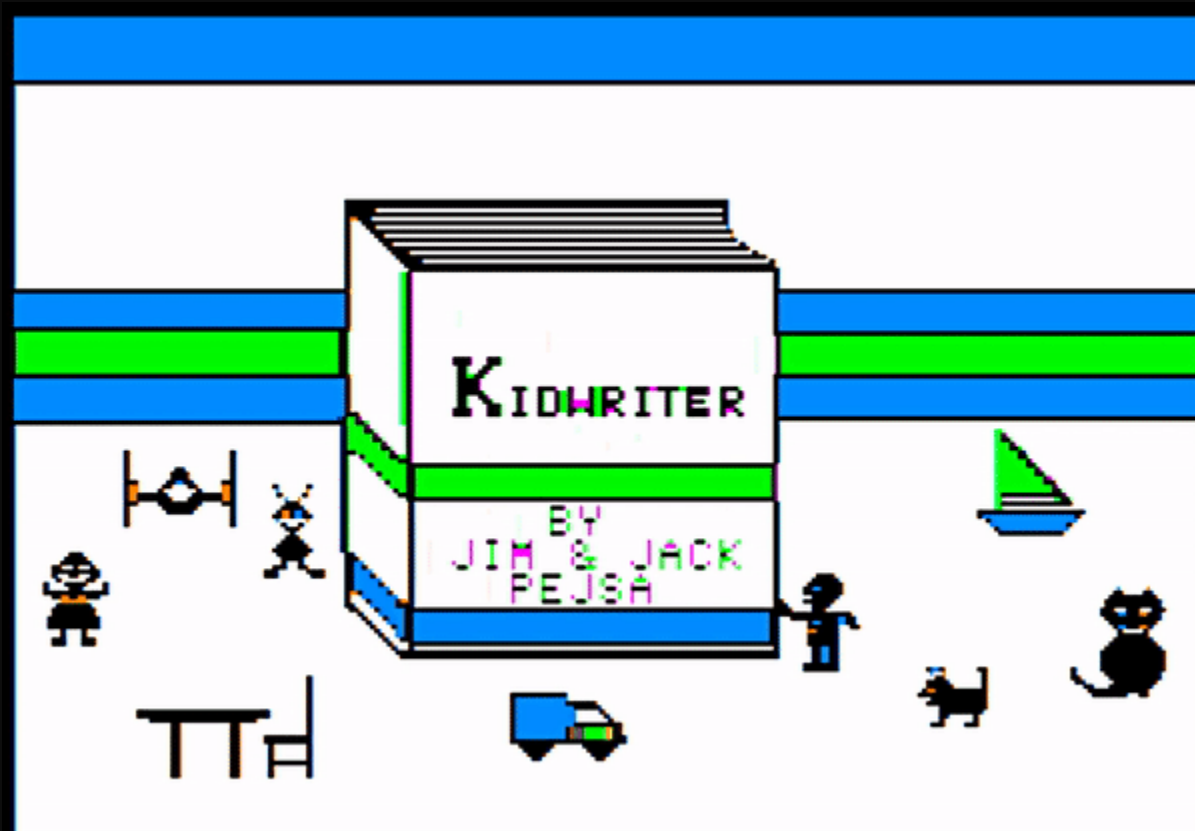
River States

Northern Plains

Great Lakes States

Mountain States

Texas



# Kidwriter

- Creative writing for kids
- Associating pictures with stories
- Word processing skills
- Narrative sequencing



=====  
Once o'pon a time, a boy & a girl each  
had a pet. The girl had a cat, the boy  
had a dog. But what they didn't know  
was that their pets were magic! One day  
both of them wished to go in to space.

PRESS ANY KEY TO CONTINUE...



Brian Wiser








**Brian Wiser's  
Memories of Apple II  
&  
Programming  
in School**




You are now at the Kansas  
River crossing. Would you  
like to look around? ☸

Date: May 20, 1848  
Weather: hot  
Health: poor  
Food: 0 pounds  
Next landmark: 0 miles  
Miles traveled: 102 miles



# You Have Died of Dysentery



The creation of

## The Oregon Trail

– the iconic educational game of the 1980s

### **R. Philip Bouchard**

neo  
SOFT

CBS  
SOFTWARE

# Dinosaur Dig



Put the Easykey in place  
and press the green START key. ■

There Here two types of dinosaurs.  
Ornithischian dinosaurs, with the bird  
hip, Here plant eaters. Saurischians,  
the lizard-hipped dinosaurs, included  
both plant eaters and meat eaters.



Iguanodon has an  
Ornithischian.  
The red pubis bone  
points backwards.



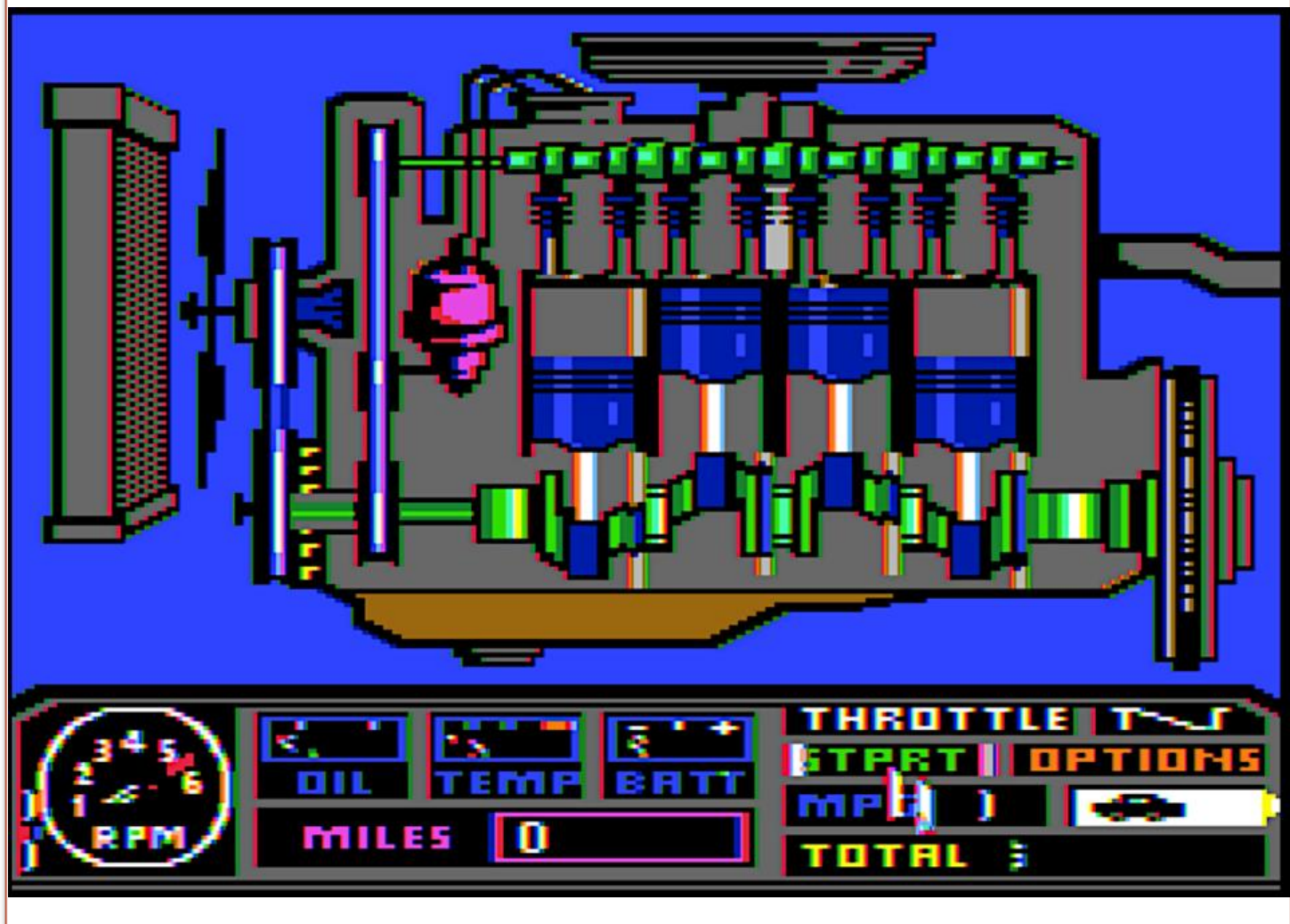
Tyrannosaurus has a  
Saurischian.  
The red pubis bone  
points forward. →



**I N J U R E D**  
**E N G I N E**

IMAGIC ©  
1984

**YOU HAVE SIXTEEN-COLOR CAPABILITY!  
TURN THE DISK OVER AND PRESS A KEY**



## ALTER EGO

### PERSONALITY DEVELOPMENT PROFILE

Use the arrow keys or I, J, K, and M to  
move the pointer next to a response.  
Press SPACE to select that response.

⇒ LET ME SELECT MY OWN PERSONALITY

LET COMPUTER SELECT MY PERSONALITY

LET COMPUTER SELECT MY PERSONALITY  
THEN LET ME EXAMINE OR EDIT IT

LOAD A PREVIOUS GAME



Please select the stage of life at  
which you would like to begin the game.

⇒ BIRTH & INFANCY

CHILDHOOD

ADOLESCENCE

YOUNG ADULTHOOD

ADULTHOOD

MIDDLE ADULTHOOD

OLD AGE



You are walking down a poorly lit street late at night when you see a teen-aged boy mugging an elderly man.



PRESS SPACE TO CONTINUE

# Basic Computer Games

**Microcomputer Edition**

**Edited by David H. Ahl**

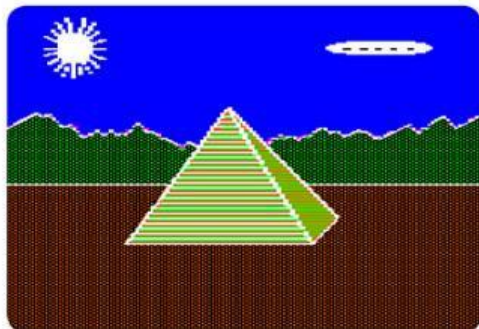


# Call-A.P.P.L.E.™

Apple PugetSound Program Library Exchange

## The Etch-a-Sketch

and Other Fun Programs



*Brian Wisler*



*The Etch-a-Sketch and Other Fun Programs* is a collection of Apple II software programmed by a student in the 1980s. BASIC and machine language programming were once taught in schools, and here you'll find a variety of useful graphics, education, utility, and game software. The author also shares stories about his programming experiences in school.

### Features 13 Programs Including:

- *The Etch-a-Sketch* – fun drawing with keyboard, joystick, and sound.
- *The Apple* – the six color logo in beautiful lo-res.
- *Annual Graph Matrix* – graph monthly amounts for one year.
- *Compound Interest* – calculate investment interest over time.
- *States & Capitals* – learn about the U.S. through quizzes.
- *Access Code* – an alarmed gatekeeper for your disks.
- *H* – a powerful HELLO program for launching files in DOS 3.3.
- *Random Access Filer* – a simple text database for contacts.
- *Tunnel Race* – dodge obstacles through a text-based cavern.



Produced by  
*Brian Wisler & Bill Martens*

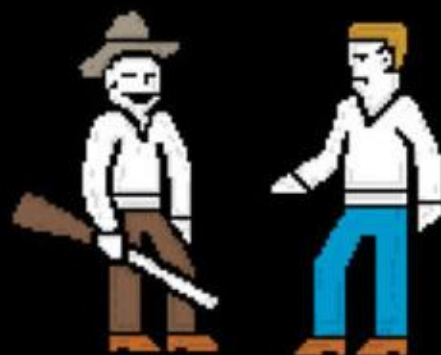
Apple PugetSound Program Library Exchange





Dennis Kovacich





"Terry? That's a GIRLS name!"

---



You have died of dissing Terry

# My journey to computers

- 1974 - field trip to Lawrence Hall of Science at UC Berkeley

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- 1980-1990 - Writing math flash facts for kids
- 1984 - Macintosh
- 1988 - Mac SE/30 AppleTalk network with 8 //es and 4 GSeS



Chris Torrence





OREGON

Do you need instructions (Yes/No)?YES

This program simulates a trip over the Oregon Trail from Independence, Missouri, to Oregon City, Oregon in 1847. Your family of five will cover the 2000 mile Oregon Trail in 5-6 months --- If you make it alive.

You had saved \$900 for the trip, and you've just paid \$200 for a wagon.  
You will need to spend the rest of your money on the following items:

Monday, April 12, 1847

You'd better do some hunting or buy food SOON!!!!

Total milease is 196

Food	Bullets	Clothings	Misc. Supp.
7	3800	70	64

Do you want to (1) Stop at the next fort, (2) Hunt, or (3)

Type bang: BANG

Right between the eyes---You got a bis one!!!

Watch your calories tonight!!!

Do you want to eat (1) Poorly (2) Moderately  
or (3) well?2

Bandits attack

Type bang: BANG

You got shot in the leg and they took one oxen.

You'd better have a Doc' look at your leg.





P547

ATA CENTER -masswerk,8D

BANG!

■ ■ ■

■ ■

0 0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

1 ■ 1

■ 2 2 2 ■ 2

3 3

```
SEE TYPETIME.BAS FOR A DEMO PROGRAM.  
TO RUN OREGON TRAIL TYPE:  
RUN OREGON1975  
JRUN OREGON1975  
DO YOU NEED INSTRUCTIONS (YES/NO)?YES
```



```
THIS PROGRAM SIMULATES A TRIP OVER  
THE OREGON TRAIL FROM INDEPENDENCE,  
MISSOURI TO OREGON CITY, OREGON  
IN 1847. YOUR FAMILY OF FIVE WILL  
COVER THE 2000 MILE OREGON TRAIL  
IN 5-6 MONTHS --- IF YOU MAKE IT ALIVE.
```

```
YOU HAD SAVED $900 TO SPEND FOR THE  
TRIP, AND YOU'VE JUST PAID $200 FOR  
A WAGON.  
YOU WILL NEED TO SPEND THE REST OF YOUR  
MONEY ON THE FOLLOWING ITEMS:
```

```
PRESS <RETURN>...
```



## Oregon Trail Mainframe

by [Chris Torrence](#)



Publication date

2015

Topics

[Apple II](#), [Oregon Trail](#), [mainframe](#), [Applesoft](#)

1,126 Views

4 Favorites

A conversion of Oregon Trail to Applesoft BASIC, created by Chris Torrence in April 2015, from the original 1975 source code uploaded by Jimmy Maher (<https://archive.org/details/200106-tops10-in-a-box>)





Ken Gagne





# The History of Computing and the Internet

KansasFest 2019





# VisiCalc—a generation later

By Ken Gagne

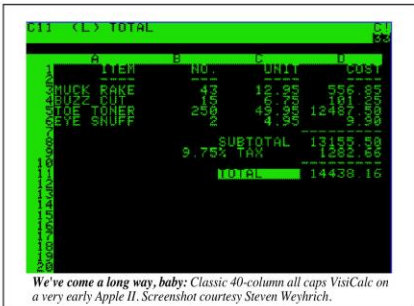
*Editor's note: Juiced.GS Associate Editor Ken Gagne teaches high school students in 2005 the ancient art of the spreadsheet from 1978—having them work with a program that was conquering the world prior to their even being born. Ken shares his perspective on today's teenagers dealing with yesterday's technology.*

\*\*\*

I teach technical writing at a high school populated with bright students whose acumen leans toward science and mathematics. Being bright and young, they naturally gravitate to the latest technology, and equip themselves with everything from iPods to Palm and cellular phones.

As an Apple II user, I wondered if the students are aware of the roots of today's machines. So when I had the opportunity to create and teach a lesson plan for the computer science class, incorporating the classic computer seemed a natural decision. I could not legally install Apple ROMs and emulators on the computer lab's Windows machines—but Sydnioomm user Thomas Compter informed me that VisiCalc was available to be freely and legally installed in a Windows environment.

VisiCalc, the first electronic spreadsheet program, was published by Software Arts for the Apple II in



*We've come a long way, baby: Classic 40-column all caps VisiCalc on a very early Apple II. Screenshot courtesy Steven Weyhrich.*

1979. It was one of the first "killer apps"—a piece of software worth buying the hardware for—for the world's first microcomputer, appealing to both Wall Street financiers and consumers who calculated their own taxes. VisiCalc eventually gave way to Lotus 1-2-3, which inspired Microsoft Excel, a spreadsheet program commonly used today for everything from survey data and staff rosters to graphs and charts. But much of what modern software accomplishes with megabytes of hard drive space and memory, VisiCalc did with much less leeway, and often more efficiency. For my class, I focused on its original financial appeal and gave a related lab assignment—but not before

a brief history lesson.

"What kind of program was invented in 1979?" First-person shooter? "Spreadsheet. What was its name?" Excel? "No, VisiCalc. How big was it?" Around 400 kilobytes, most students ventured (it was only 26). "How much memory did the Apple II have back then?" Not more than 16 megabytes, a student guessed (technically, he was correct; 16 kilo-bytes isn't more than 16 megabytes). And, most disturbing of all: "Who were the two Steves who founded Apple?" Steve Jobs and... there was another Steve? To a vintage computer enthusiast, the lack of perspective and context today's

computer users have is simultaneously both amusing and appalling.

I then provided them with a photocopy of the original VisiCalc reference card and a sample checkbook ledger and instructed them to create their own fictional record, complete with deposits, withdrawals, and balances. Once they mastered the mathematics, further particulars would include justifying various headers, applying currency formatting to certain columns, and the like.

As I expected, many students had difficulty with the assignment. The lack of a mouse and menu bars and the reliance on a text-based interface created much mystery as to which obscure command would fulfill their needs. The lesson's final objective was to determine the quit command, which was not "Quit", but "SQY"—intuitive, no? One student who confused the "Blank" and "Clear" commands learned how easy it was 26 years ago—before backups, regular save intervals, or "Undo" commands—to erase all one's data.

More than a lesson in computer usage, though, the assignment seemed to many students more educational in mathematics and logical thinking. Many of them were too young to have their own checkbooks, and a few needed help to understand that Balance = Previous Balance + Deposit - Payment, and how to represent that using cell values. I'd preceded the exercise with demonstrating that paper spreadsheets don't automatically recalculate their cells, which is why a computer made things so much easier twenty-six years ago. But some students manually entered all their numbers, which of course resulted in the spreadsheet not updating when I tested it by changing the deposit and payment values. Other students created a balance column that acknowledged either a deposit or a payment, depending on which one they'd entered; that failed when I



*Windows to the past: An ancient spreadsheet—VisiCalc—running on one of today's operating systems—Windows.*

changed the deposit to a payment. ("But you can't have both!" they'd protest; "I don't care, and neither should the balance column. It should handle anything you throw at it.")

Two students (perhaps who'd been weaned on Lotus 1-2-3?) mastered the intricacies of this program quickly, and produced some varied and elegant formulas to fulfill the assignment. Many struggled for longer than I anticipated, but most finished before the hour was up.

What did they learn from this exercise? I'm not sure, but I can tell you what the teacher learned: the need to preserve our history is strong. I asked the students to tell their parents that they'd learned VisiCalc in school today, and watch their eyes mist over with fond memories. Most students reported back the next day that all they'd received was blank stares. This new generation is surpassing the old one, but with few of their building blocks.

My job is to enrich my students and prepare them for the world they will encounter upon graduation—a world

whose technological revolutions and evolutions are moving at a breakneck pace. But if they do not understand why machines work as they do, and cannot adjust their expectations to adapt themselves to a variety of technical circumstances, they may find themselves simply going through the motions, being machines themselves. The Apple II inspired creativity; students who are creative themselves will appreciate that and will express it in their own work, inspiring others. What a lesson that would be!

\*\*\*

*You may remember Juiced.GS Associate Editor Ken Gagne from such films as 'Disc' and 'Fever Pitch'—neither of which he will be showing in the Film Analysis class he is looking forward to teaching this spring. Instead, the curriculum will encompass a variety of self-selected works, from black and white classics like 'Days of Wine and Roses' and 'Fail-Safe' to modern geek favorites including 'TRON' and 'Mystery Science Theater 3000'.*



# How does history affect us?

QWERTY



# How does history affect us?

## DVORAK

~ ,	! 1	@ 2	# 3	\$ 4	% 5	^ 6	& 7	* 8	( 9	) 0	{ [	} ]	← Backspace
Tab ↔	" ,	< ,	> .	P	Y	F	G	C	R	L	? /	+ =	 \
Caps Lock ↑	A	O	E	U	I	D	H	T	N	S	- _	Enter ↵	
Shift ↑	:	Q	J	K	X	B	M	W	V	Z	Shift ↑		
Ctrl	Win Key	Alt							Alt Gr	Win Key	Menu	Ctrl	

# How does history affect us?

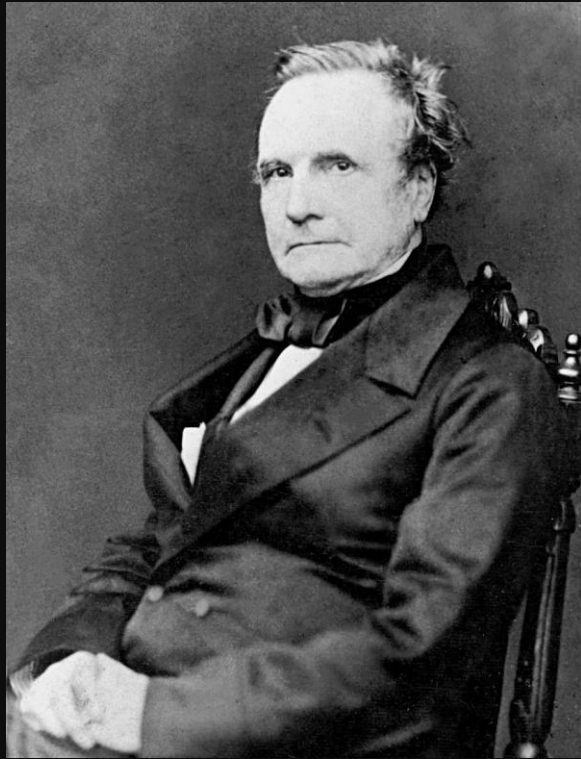
## Colemak

~ ,	! 1	@ 2	# 3	\$ 4	% 5	^ 6	& 7	* 8	( 9	) 0	- _	+ =	← Backspace
Tab ↔	Q	W	F	P	G	J	L	U	Y	:	{	}	
← Backspace	A	R	S	T	D	H	N	E	I	O	"	'	↵ Enter
Shift ⬆	Z	X	C	V	B	K	M	< ,	> .	?	/	Shift ⬆	
Ctrl	Win Key	Alt								Alt Gr	Win Key	Menu	Ctrl

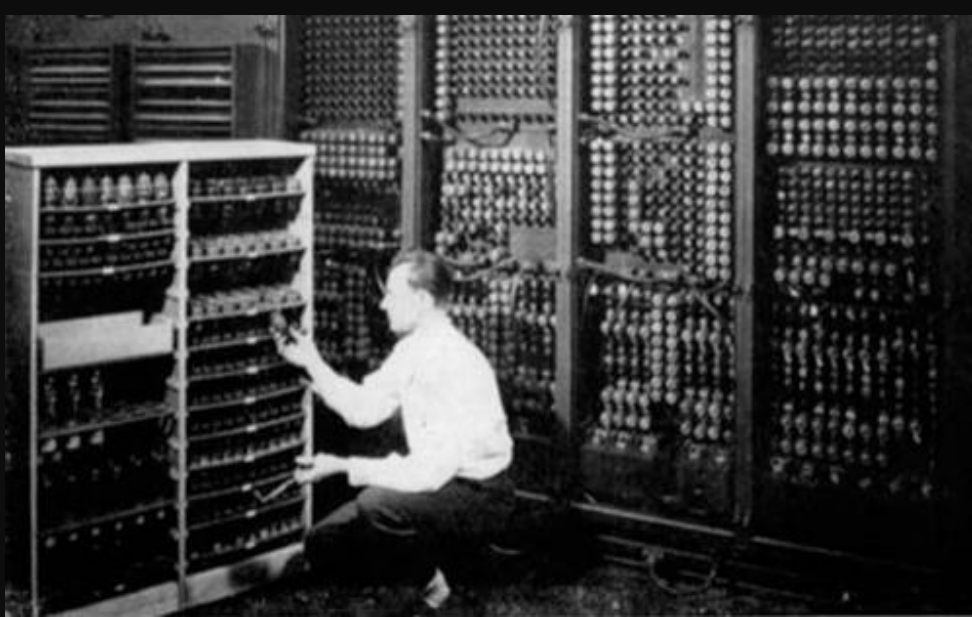
# Who invented the computer?



... Hard to say.








Relays 6-2 in 033 failed special speed test  
in relay .. 10,000 test.

1100 Started Cosine Tape (Sine check)  
1525 Started Multi Adder Test.

1545  Relay #70 Panel F  
(moth) in relay.

~~1630~~ 1630 Antangit started.  
1700 closed down.

Relay  
2145  
Relay 33

# Russians Win Race To Launch Earth Satellite

## Man On Threshold Of Space Travel

By DANIEL F. GILMORE

United Press Staff Correspondent

LONDON (UP)—The pulsating radio "beep" of the first manmade earth satellite signalled today to the world that man had crossed the threshold into the age of travel through space.

The Soviet Union announced it had won the race into space by launching an earth satellite Friday, a 184-pound, 22-inch globe now orbiting the earth at 18,000 miles an hour, 560 miles up.

Millions of persons throughout the world heard the "beep...beep...beep..." rebroadcast today by local stations and realized that man had taken his first faltering steps into the new era.

Launching of the satellite was a tremendous victory for science. It was a more tremendous victory for Soviet propaganda to be able to trumpet to the world the Russians were the first to break through the frontiers of space.

**Bolsters ICBM Claims**

Bolstered Russian claims to

### — WEATHER —

**WEST VIRGINIA**—Partly cloudy with highest in the 60s today and Sunday. Lowest tonight 50 and 40 east portions.

**VIRGINIA**—Fair with lowest 45 to 50 west and north and 50 to 55 southeast portions tonight, Sunday mostly sunny and a little warmer. Tides on the coast and lower bay will run a foot or two above normal.

### How To Spot Satellite

By UNITED PRESS

Here's how to look for the Russian earth satellite which will be whizzing through the sky at 18,000 miles an hour.

The best time to spot it is at dawn or dusk when the sky is semi-dark. There is a chance that it could be seen if it travels across the face of the moon at night.

The best instruments to use are ordinary binoculars or telescopes. Powerful telescopes won't pick it up because of their narrow fields.

Through optical instruments, the satellite will look like the faintest star which can be seen with the naked eye.

Keep a sharp eye out. The satellite travels so fast it may appear on the horizon for only seconds and chances of spotting it have been estimated at one in a hundred.

### Epic-Making

### U. S. May Speed Up Satellite Program

By JOSEPH L. MYLER

United Press Staff Correspondent

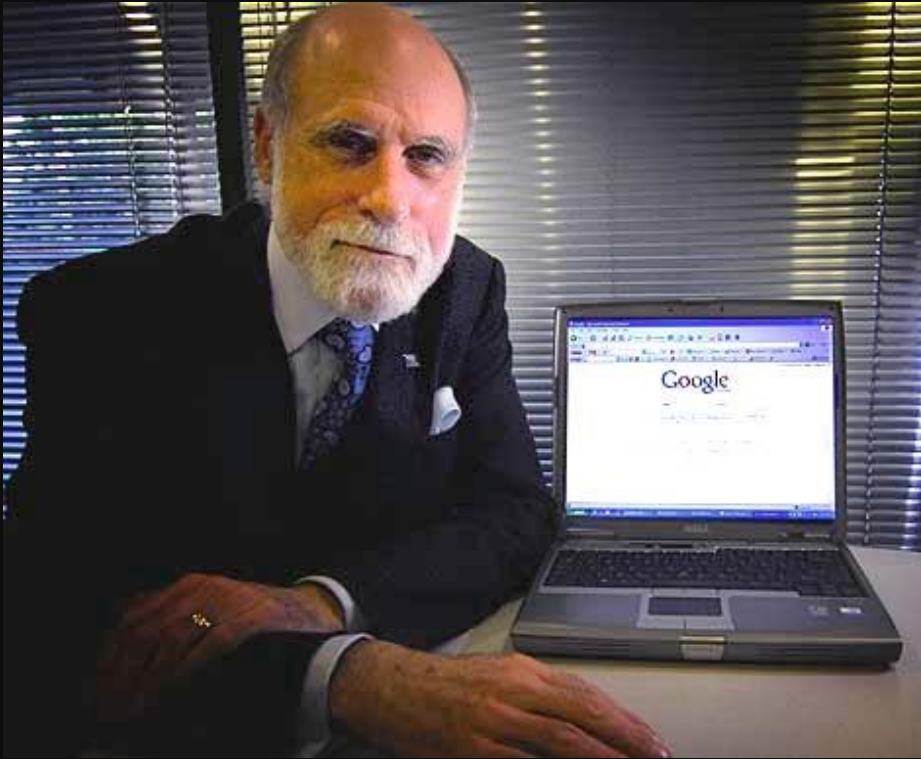
WASHINGTON (UP)—American scientists, caught flatfooted by Russia's epic launching of the man-made moon, indicated that the United States may speed its own earth satellite program.

Leaders of the U.S. satellite program also said that it appears Russia rocketed its heavy 184-pound satellite into a globe-circling orbit with a rocket "no" an intercontinental ballistic missile.

That could mean Russia only has beaten this country, frontiers of space, but also it has been called the "ultimate" weapon for modern day warfare. ICBM. This country has not tested a successful ICBM.

American diplomats could Russia had scored a notable





# Emerson College (p1 of 15)

**Emerson College RSS publisher**

Skip to Main Content

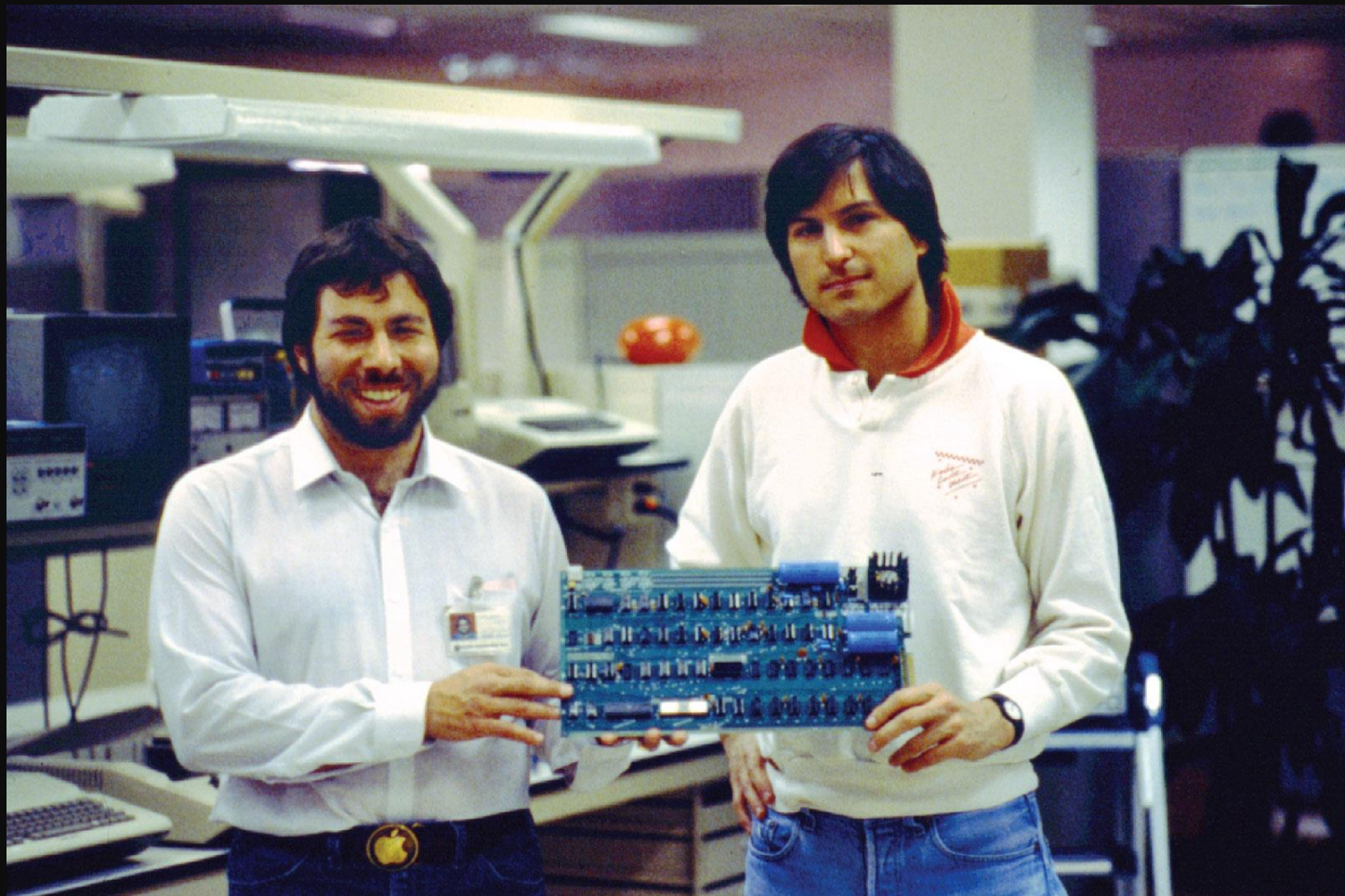
- \* About Emerson
- \* Academics
- \* Student Life
- \* Admission
- \* News & Events
- \* Athletics
- \* Emerson Live

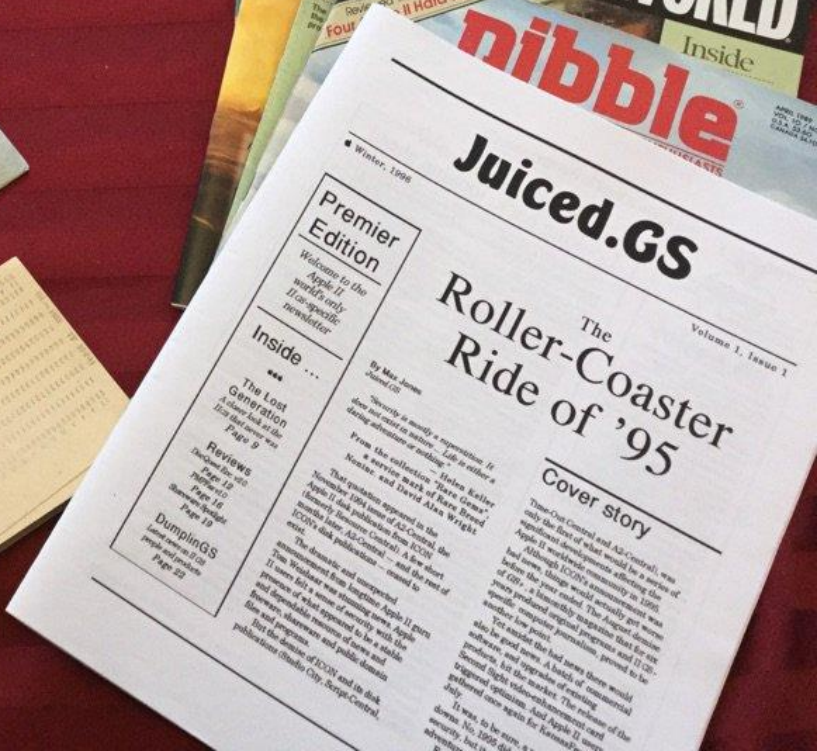
## Facts &amp; Figures ?

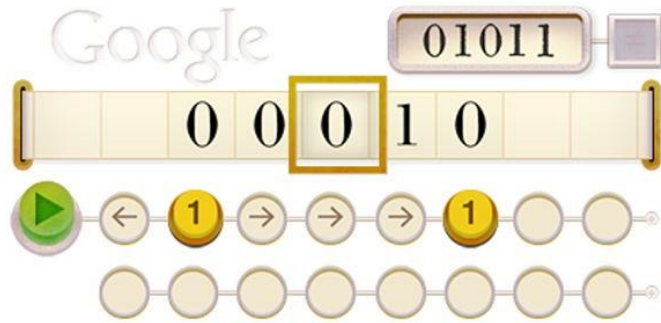
- \* Administration
- \* History
- \* Notable Alumni
- \* Diversity
- \* Tuition & Financial Aid
- \* Academic Calendar

— press space for next page —

Arrow keys: Up and Down to move. Right to follow a link; Left to go back.  
H)elp O)ptions P)rint G)o M)ain screen Q)uit /=search [delete]=history list







THE **PC WEENIES**™



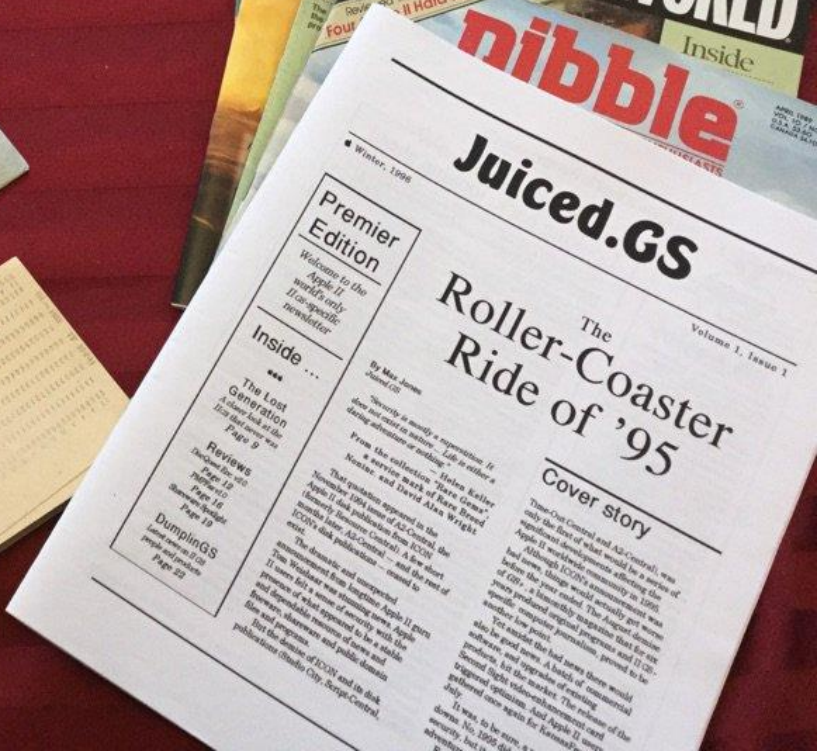
WWW.PCWEENIES.NET

IT'S NEVER ENOUGH...



©2008 KRISHNA M. SADASIVAM











Conclusion



"The Oregon Trail Players need not take into account the lives of others unless it's necessary to do so in order to accomplish their personal objectives. Thus, the cultures of the Plains Indians are backgrounded. The game marginalizes their view of the earth."

- Bigelow, Bill, "On the road to cultural bias: A critique of The Oregon Trail CD-ROM"

"... we need to remember that these CD-ROMs are not teacher substitutes. The teacher's role in analyzing and presenting these devices in a broader ethical context is absolutely vital. Thus, teachers across the country must begin a dialogue toward developing a critical computer literacy."

- Bigelow, Bill, "On the road to cultural bias: A critique of The Oregon Trail CD-ROM"

What if we de-colonized  
Oregon Trail?



**TOKENISH has died.**

Date: March 23, 1848  
Weather: cold  
Health: very poor  
Food: 0 pounds  
Next landmark: 30 miles  
Miles traveled: 524 miles

Press SPACE BAR to continue





**RACISM has died.**

Date: March 19, 1848  
Weather: cool  
Health: very poor  
Food: 0 pounds  
Next landmark: 114 miles  
Miles traveled: 440 miles

Press SPACE BAR to continue



**SEXISM has died.**

Date: March 16, 1848  
Weather: cool  
Health: very poor  
Food: 0 pounds  
Next landmark: 218 miles  
Miles traveled: 336 miles

Press SPACE BAR to continue



Here lies  
EXCLUSION

Press SPACE BAR to continue

"The pedagogy of the oppressed, animated by authentic, humanist (not humanitarian) generosity, presents itself as a pedagogy of humankind... This is why, as we affirmed earlier, the pedagogy of the oppressed cannot be deleoped or practiced by the oppressors."

- Paolo Friere



# Discussion & Homework



# References

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