

Lecture 17

Games and Consumer Electronics

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05-899A/05-499A

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Consumer Electronics

Everyday use

Affordable, off the shelf

Entertainment, productivity, communication



Television gives you a choice seat at the game.

Television—a Season Pass to Baseball!

Now! Zenith Adds "LAZY BONES" Remote Control to *Black Magic* Television



Complete automatic program selection in the palm of your hand...from anywhere in the room. Another Zenith "First".

It's been interesting out of the Academic Digital Forum since the recent mid-term break that most students have chosen to take a program with a small, individualized workload that fits easily into the pace of your band just plays lightly with your friends. There's all there is to it. Nothing more to it than that. Not one single band in effect or revenue. But the necessary adjustments are made for your educational needs.

Here is the present situation as I see it: given the available evidence and taking into account the following considerations, there is

Our thanks to Ruth Morrison, medical student, 1928-29, for "Helpful Hints" given over her typewriter, and to Ruthie Morrison, now Mrs. Ruth Blum, medical student, 1930-31, for "Helpful Hints" given over her typewriter. The first two issues of the new publication, "Helpful Hints," will be available in October.

ZENITH
— 1980 —
— 1981 —

All New

**Students of Operating Systems
Report Card:**

It is of benefit to the operator to understand existing and certain influences which affect the strength and life of these formed heat-shield materials. These strong jointing properties are associated with the natural heat-shield qualities of the material. It is the purpose of this paper to present and give a brief "Review of the Literature."

Only Zenith
Television Gives You
All These

3. *How Sustainable Should Parks Be?* In addition, managers continue to face pressure from those, members and non-members, who wish to have parks remain as natural as possible or fully reflect the way citizens understand them.

It has "base camp" where things are stored for when the team is at the base of a cliff requiring climbing skills which will be used by some members.

8. Conclusions for Photoelectron. It can be seen that the overall photoelectron energy spectrum is composed of a continuous carrier and characterized by a series of discrete energy modulations which may be attributed to various high-energy particle interactions present in the plasma.

4. **Software for Monitoring the Environment** (100% English). This program contains a number of modules. With a mouse, the user may enter data into the system. The data may then be stored in a file and later read into the system to make further calculations.

It is noteworthy of a general "trend" from simple to more complex, more, the changes are in the opposite direction for the problems of more general character of greater complexity.

4. "Speed" issues. Some members complain that members of their parties and councils are given an advantage over other members by being allowed to speak first.

They have shown us, and shown the world, an ideal ("Nordic Model") with the best features (universal access to care) of the best of the three. This model is based on a long history of social welfare, and it is a model that can be adopted by other countries.

1984. *Journal of the American Statistical Association*, **79**, 378-391. See also the discussion section of this paper, which discusses the use of an environmental index to predict disease incidence. Note that the use of the term "environmental index" is not intended to connote a measure of physical/chemical variables, but rather to denote a measure of disease incidence.

New South Wales R.R. added another line to the network. "Western Branch" which runs from Goulburn and terminating near Juniper. This was subsequently opened to Wagga, bypassing any section over 1000m.







CHANNEL
LOWER

VOLUME
MUTE

OFF-ON

CHANNEL
HIGHER

ZENITH
SPACE COMMAND





Television Remotes

Modal options

Instantaneous operations (usually)

Better wireless affordances

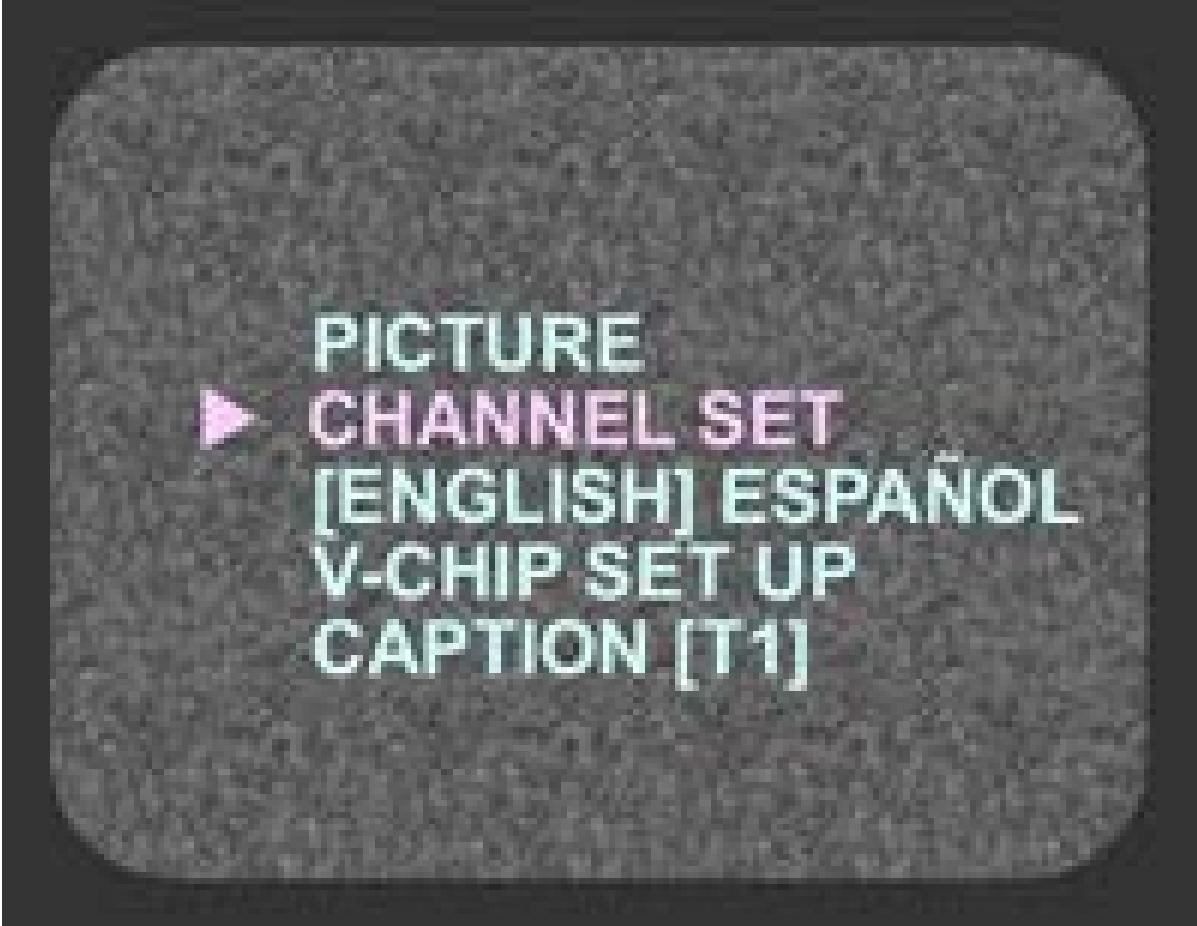
Increasing complexity

Converging functionality



121

73%



PICTURE
► CHANNEL SET
[ENGLISH] ESPAÑOL
V-CHIP SET UP
CAPTION [T1]

Picture



► **Mode** : Standard



Backlight : 7



Contrast : 95



Brightness : 45



Sharpness : 50



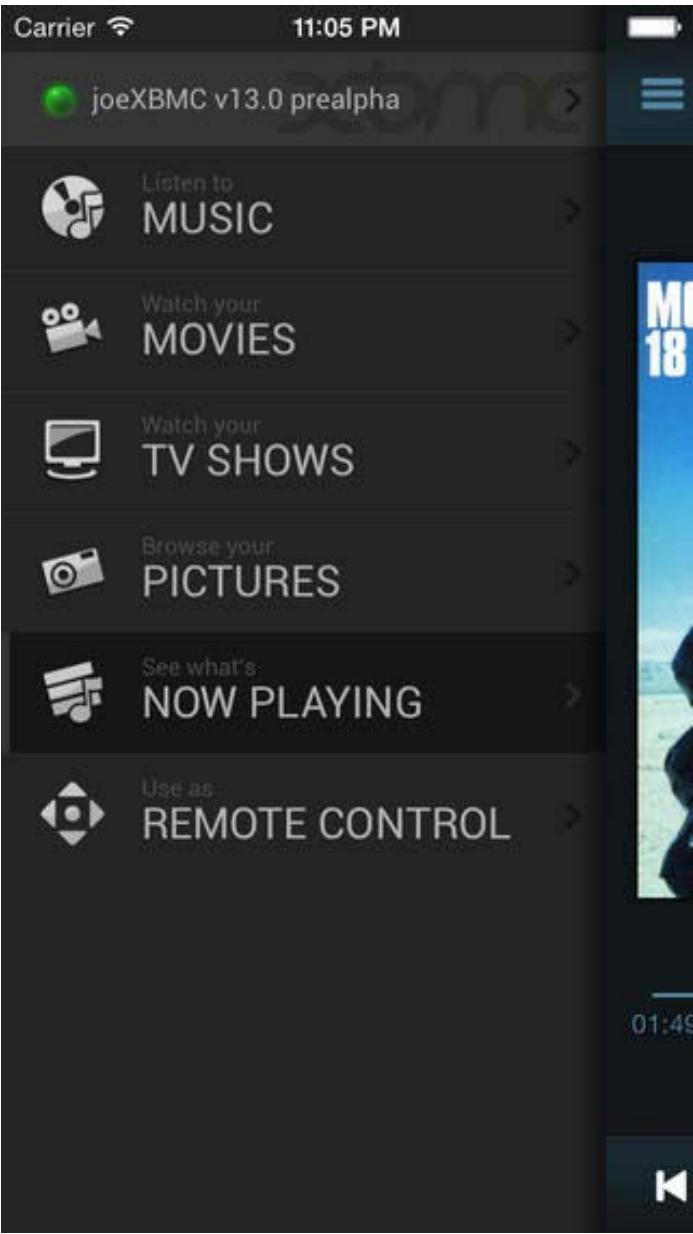
Color : 50

Tint (G/R) : G50/R50



Detailed Settings

You can configure various picture options such as the picture to suit your personal preferences.



Television OSD

Simple, text based overlays and menus
As televisions grew complex, so did
menus

Adopting conventions of contemporary
computer technology

Trend towards merging remote and OSD
(stay tuned for Chris Harrison's lecture)

Lots of other interaction techniques to think about (and improve)



Video Games

“an electronic game that involves human interaction with a user interface to generate visual feedback on a video device”

(as per Wikipedia)

Early

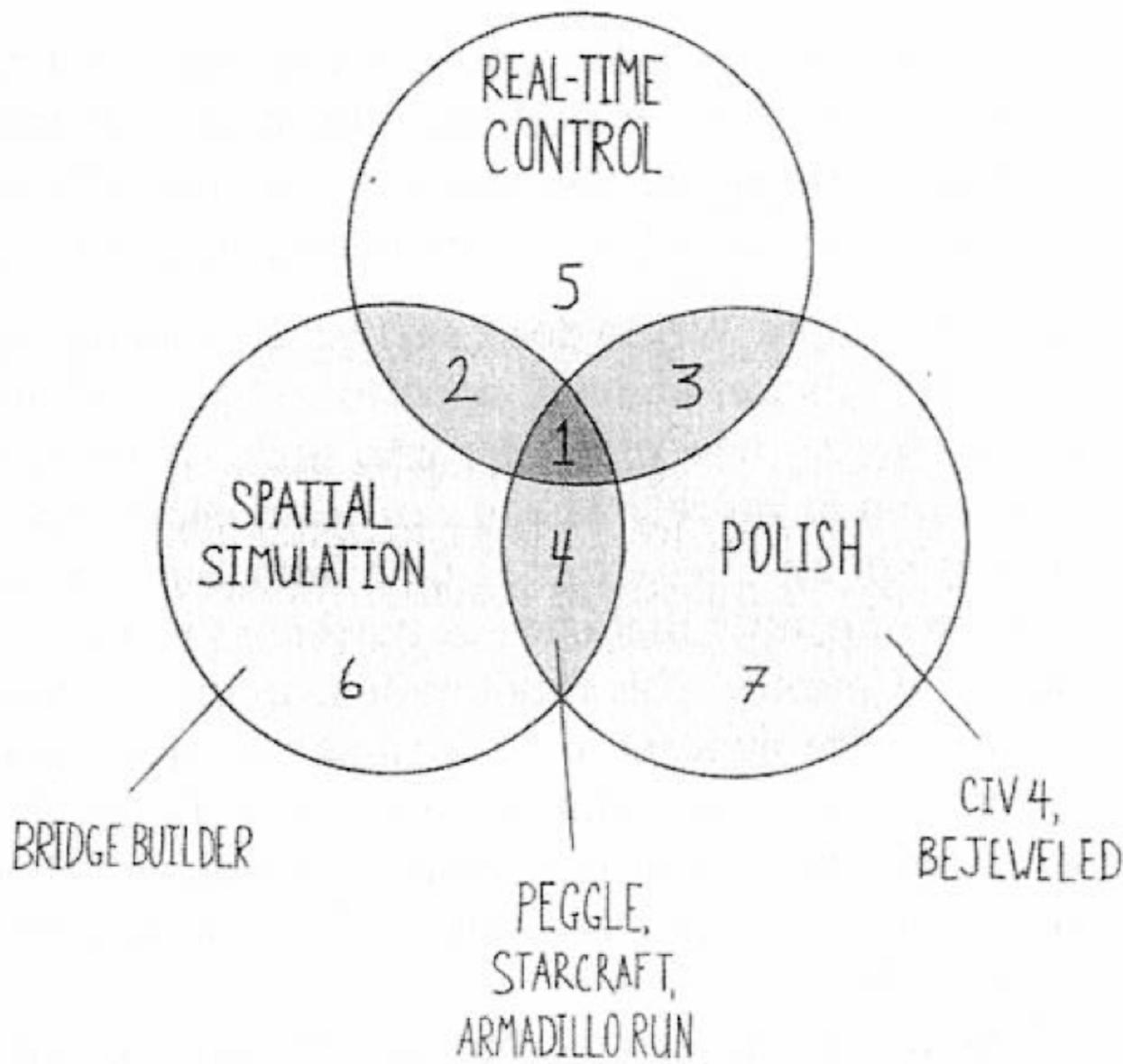


Middle



Late





3x4

0x73 ★x6



+159 1.51 (+97) 4 728/1000 291/1845 (+70) 4 8

Turn: 234 1620 AD | HELP | MENU



Taking Action

Moving



Status/Configuration



Early Era



OXO - 1952

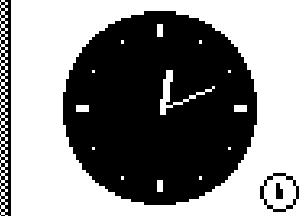
Edsac

Output from: OXO

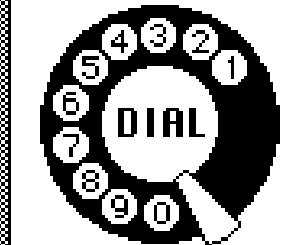
9 8 7 NOUGHTS AND CROSSES
6 5 4 BY
3 2 1 A S DOUGLAS, C.1952

LOADING PLEASE WAIT...

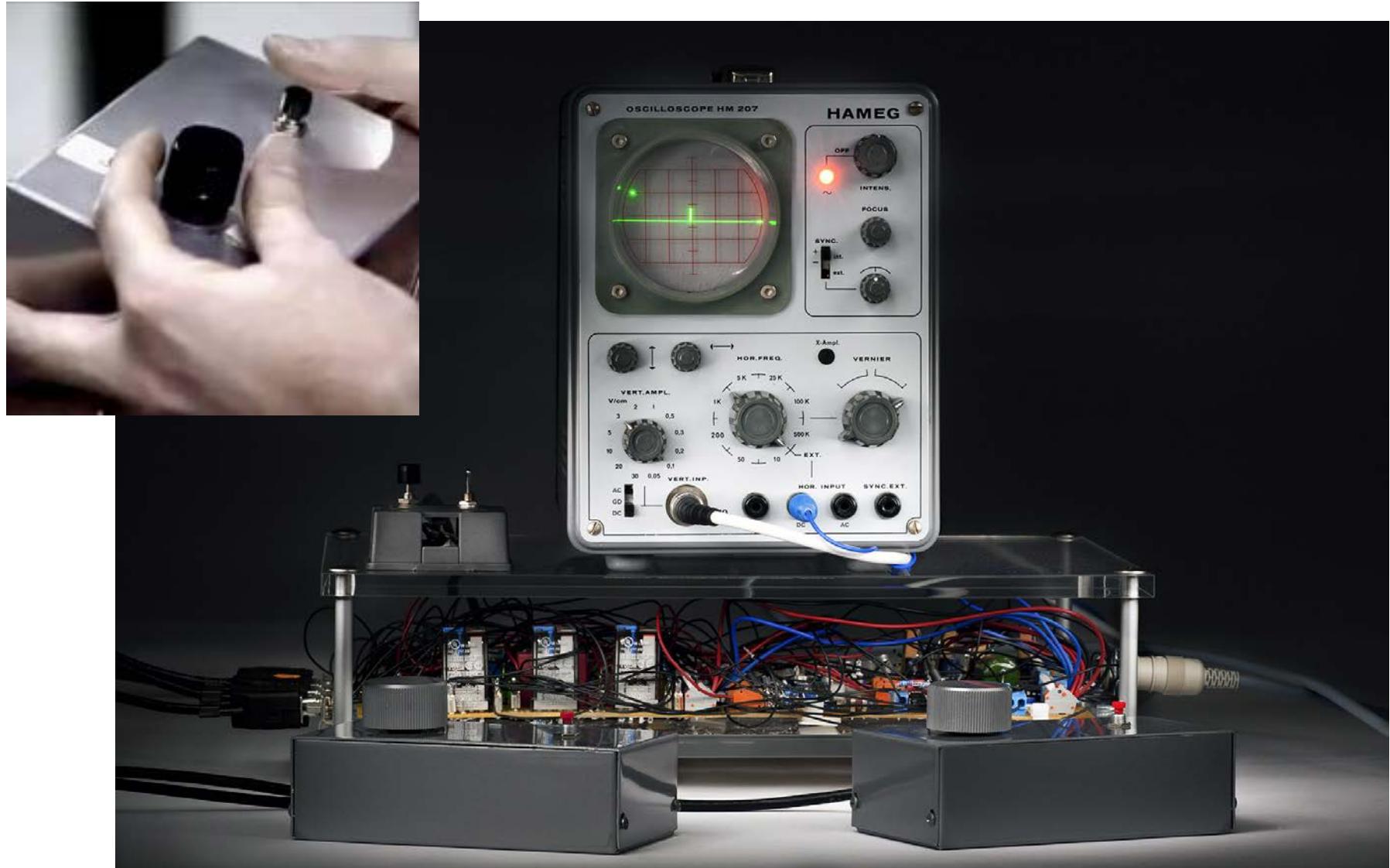
EDSAC/USER FIRST (DIAL 0/1):1
DIAL MOVE:



SCR Order Tank Long Tank 0
 Multiplier Multiplicand Short Tanks
 Multiplicand Acc



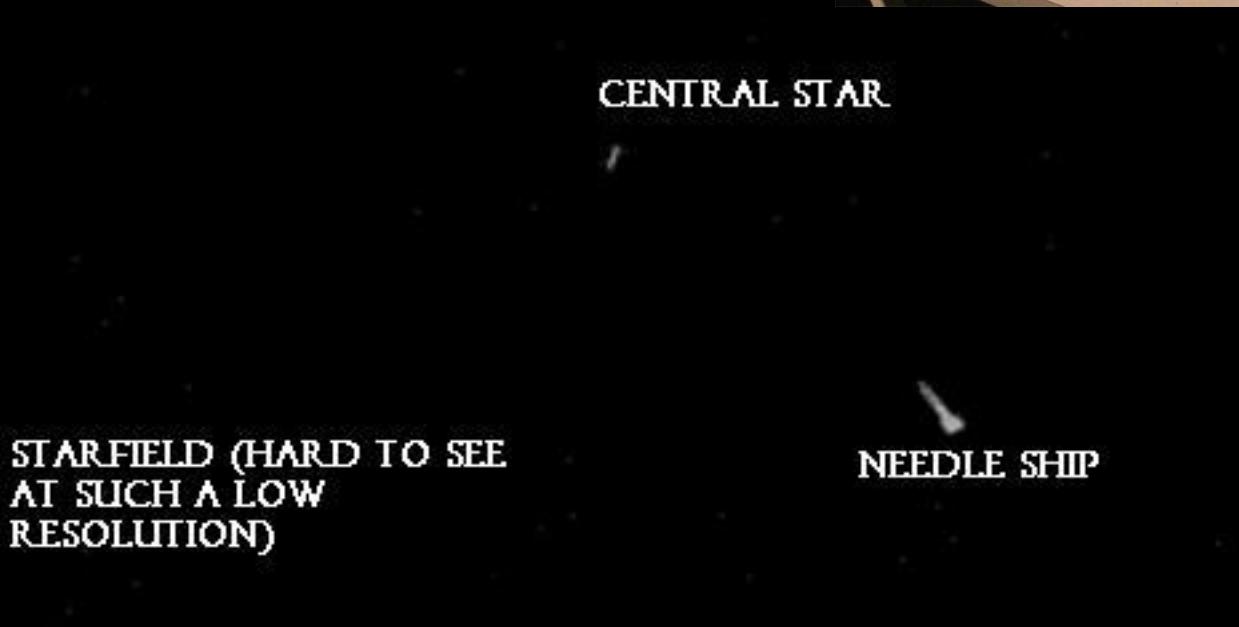
Tennis for Two - 1958



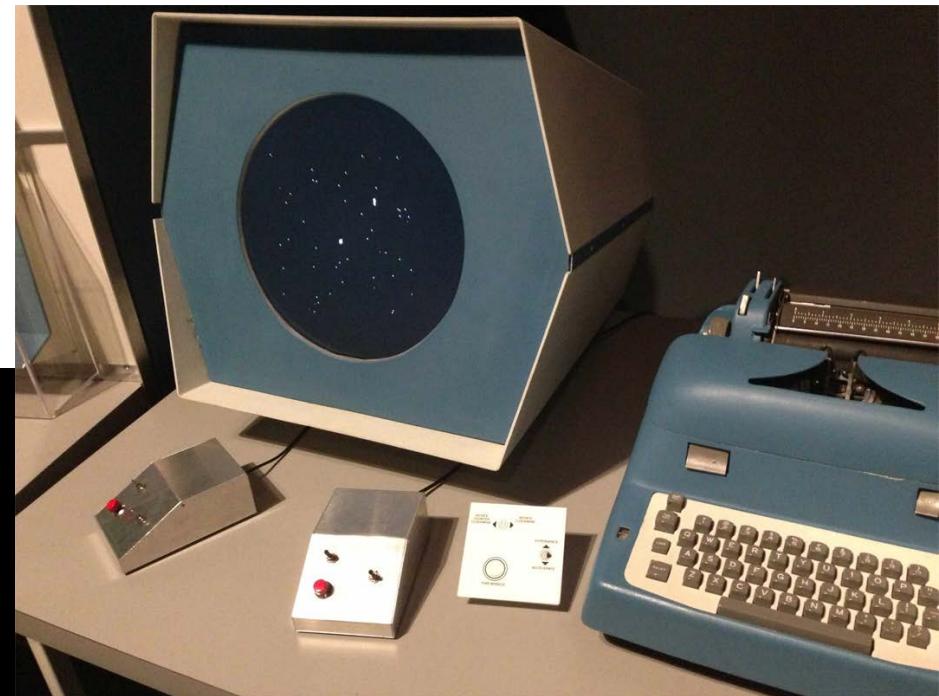
Spacewar!

1961

WEDGE SHIP



STARFIELD (HARD TO SEE
AT SUCH A LOW
RESOLUTION)





Zork 1977

West of House

Score: 0 Moves: 3

ZORK I: The Great Underground Empire

Copyright (c) 1981, 1982, 1983 Infocom, Inc. All rights reserved.

ZORK is a registered trademark of Infocom, Inc.

Revision 88 / Serial number 840726

West of House

You are standing in an open field west of a white house, with a boarded front door.

There is a small mailbox here.

> **examine mailbox**

The small mailbox is closed.

> **open mailbox**

Opening the small mailbox reveals a leaflet.

> **get leaflet**

Taken.

> |

Early Games

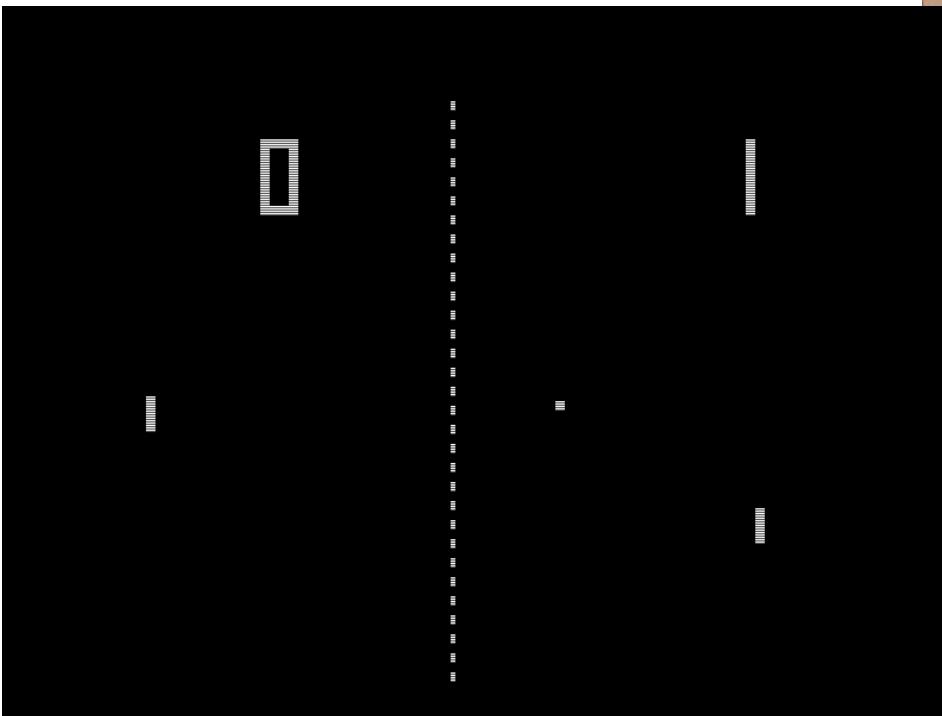
- Appropriate existing physical games
- ‘Hacked’ together controllers
- Very simple interactions
- Arcades

Arcade Games



Pong

1972



Space Invaders

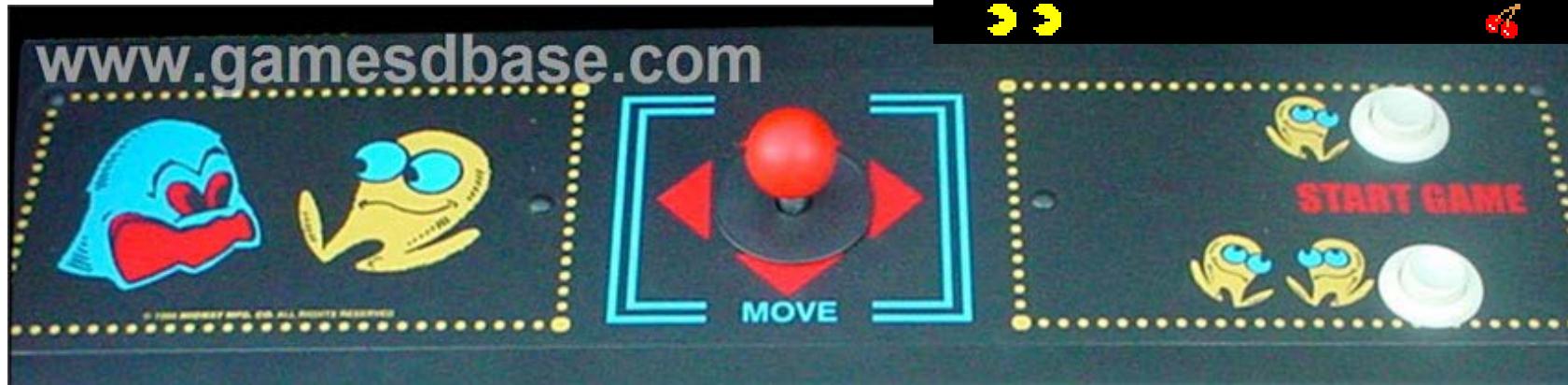
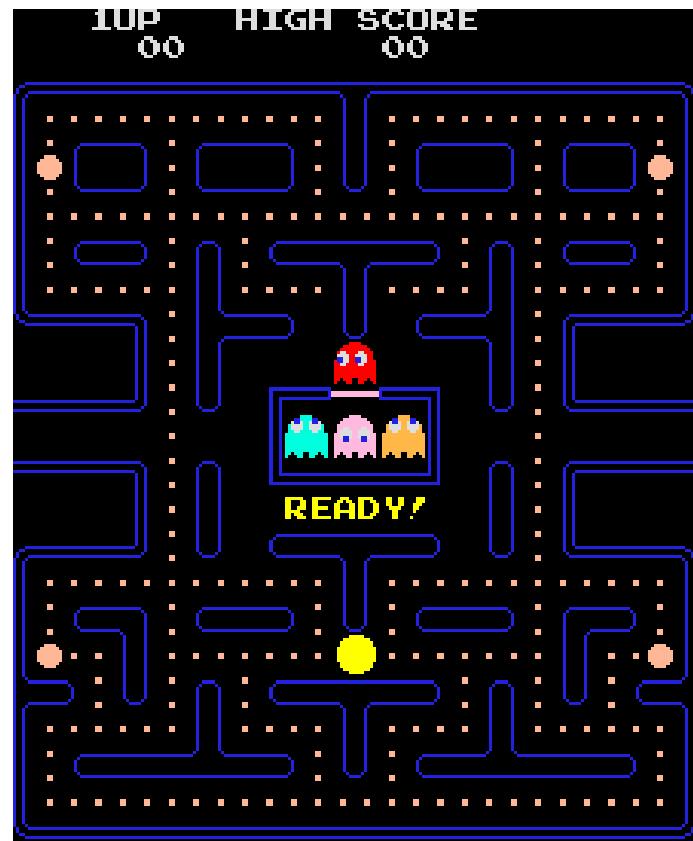
1978



Space Invaders Video

[YouTube Link](#)

Pacman - 1980





Consumer Game Consoles

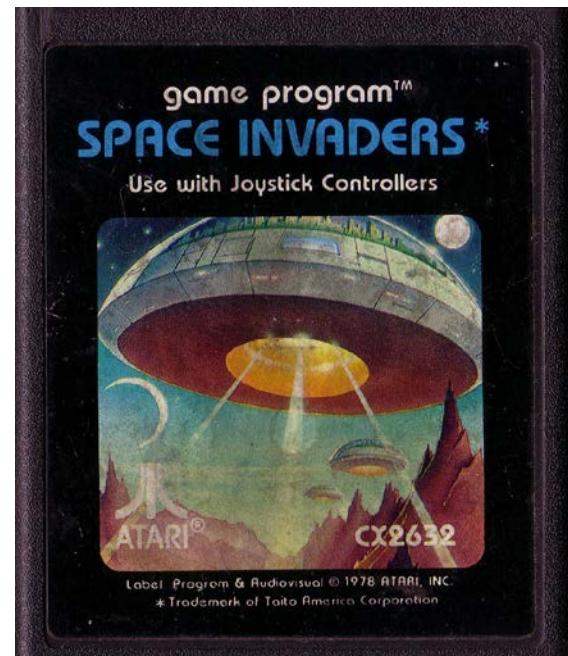
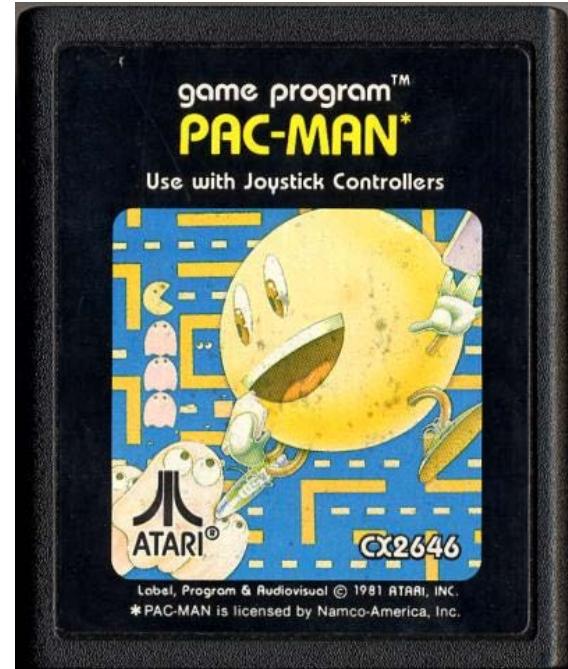






Atari 2600

- Sears Video Arcade
- 1978 - \$199
- Space Invaders – 1980
- Fancy, graphic manuals
- Similar controls to arcade
- Home gaming revolution



Pitfall - 1982



Nintendo Entertainment System

1983 / 1985





WORLD 1
(M) x 4 ►►►►►►► P. \$ 2
00000000 6295





Legend of Zelda Video

[YouTube Link](#)

REGISTER YOUR NAME

NATHAN



REGISTER

END

A	B	C	D	E	F	G	H	I	J	K
L	M	N	O	P	Q	R	S	T	U	V
W	X	Y	Z	-	.	,	!	'	8	.
0	1	2	3	4	5	6	7	8	9	



DUCK HUNT

- ▲ GAME A 1 DUCK
- GAME B 2 DUCKS
- GAME C CLAY SHOOTING

TOP SCORE = 12000

©1984 NINTENDO CO.,LTD.





Middle Era



Super Nintendo

1990 / 1991











	LOCKE		Item
	LU 63		Skills
	HP 2991/5549		Equip
	MP 215/715		Relic
	SETZER		Status
	LU 51		Config
	HP 2872/3872		
	MP 200/602		Save
	CELES		 Time 26:19
	LU 54		
	HP 4321/4321		
	MP 298/655		
	TERRA		 Steps 52855
	LU 51		
	HP 1127/3921		 Gp 879204
	MP 209/609		



Sega Genesis

1988 / 1989



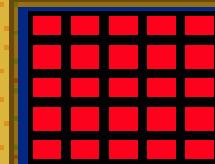
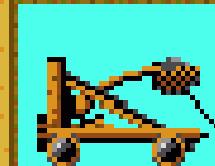
Tynnesbury the Sorceress Days Left: 199

Adventureing Spells

- Bridge
- Time Stop
- Find Villain
- Castle Gate
- Town Gate
- Instant Army
- Raise Control

Combat Spells

- Clone
- Teleport
- Fireball I
- Lightning
- Freeze
- Resurrect
- Turn Undead





VS



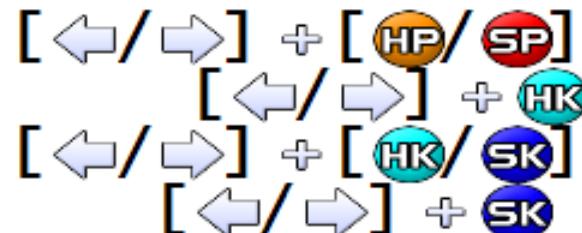




Ken Masters

:Throws:

NS Seoi Nage
NS Tsukami Hiza Geri
N Jigoku Guruma
S Jigoku Guruma



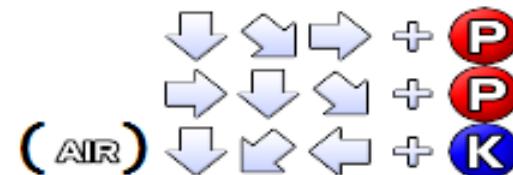
:Air Throws:

S Jigoku Fuusha



:Special Moves:

NS Hadou Ken
NS Shouryuu Ken
NS Tatsumaki Senpuu Kyaku





What about the PC?







- File Speed Options Disasters Windows Newspaper

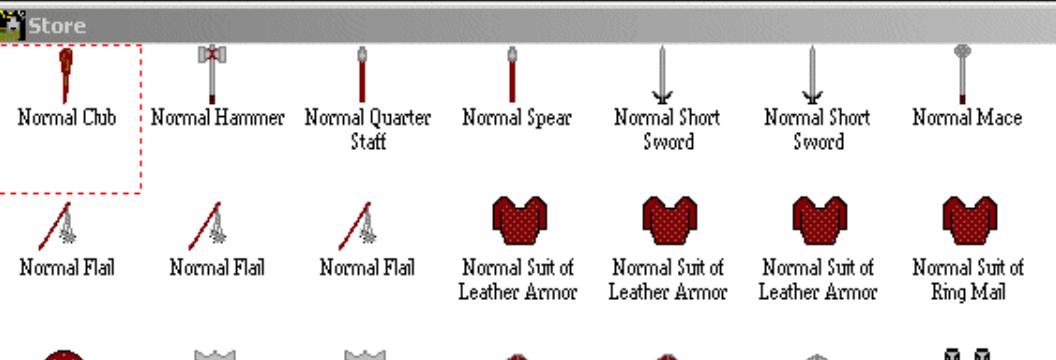


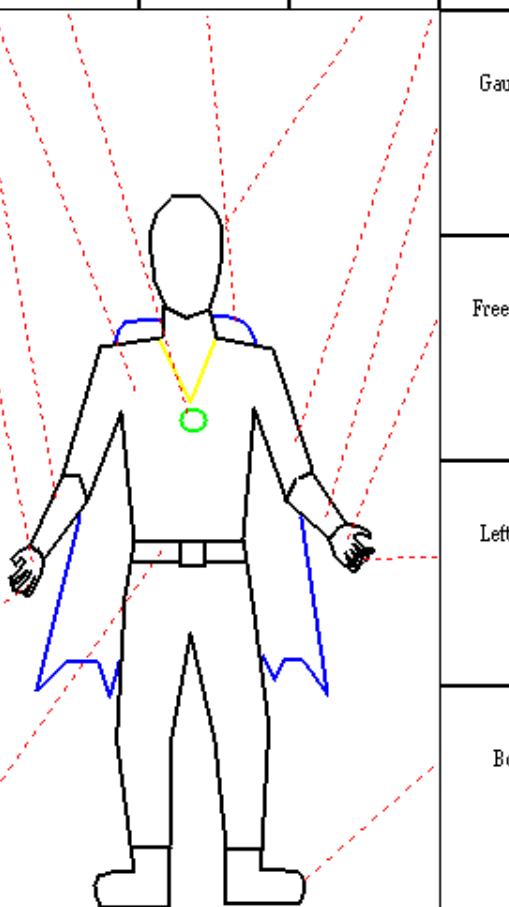
Centering Tool

Power Plant Needed

Windy

Go To

Armor	Neckwear	Overgarment	Helmet	Shield	 <p>Store</p> <p>Normal Club Normal Hammer Normal Quarter Staff Normal Spear Normal Short Sword Normal Short Sword Normal Mace</p> <p>Normal Flail Normal Flail Normal Flail Normal Suit of Leather Armor Normal Suit of Leather Armor Normal Suit of Ring Mail</p> <p>Normal Small Wooden Shield Normal Small Iron Shield Normal Small Iron Shield Normal Leather Helmet Normal Leather Helmet Normal Iron Helmet</p> <p>Normal Bracers Normal Bracers Normal Gauntlets Normal Gauntlets Normal Gauntlets</p>							
Bracers					Gauntlets							
↓ Normal Dagger					Free Hand							
Right Ring					Left Ring							
Belt					Boots	 <p>Small Pack Wt 1000 (12000) Bulk 1000 (50000)</p> <p>Purse</p>						
												





Doom 1 Video

[YouTube Link](#)



Nintendo 64

1996



Sony Playstation 1995

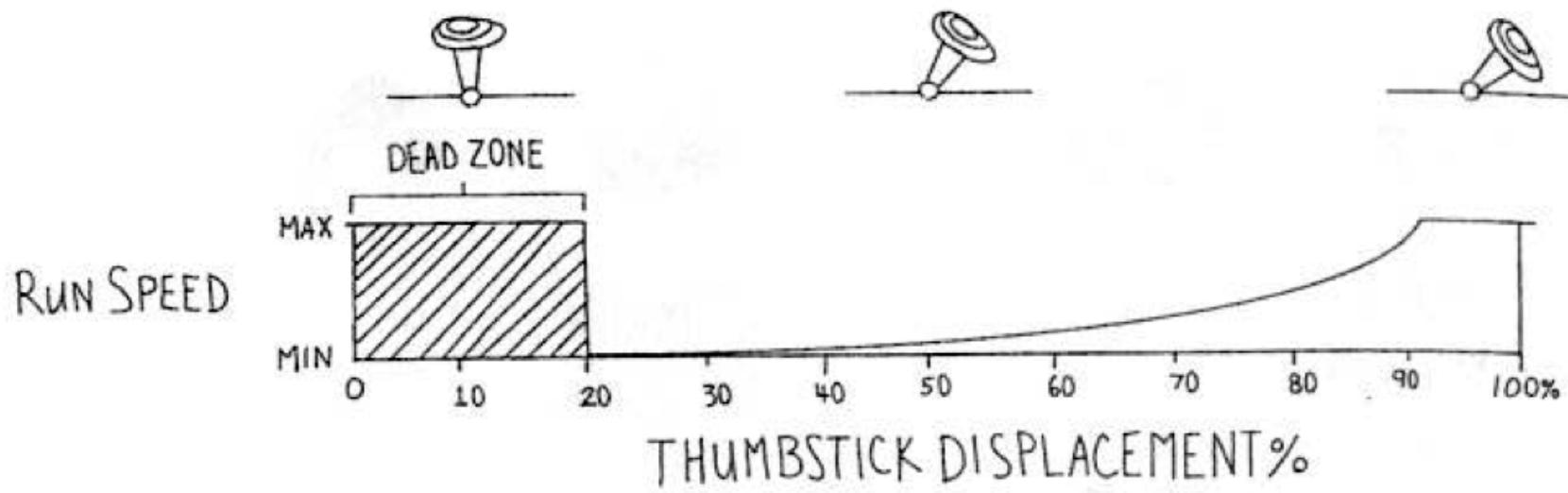


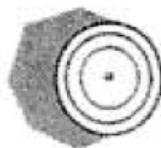




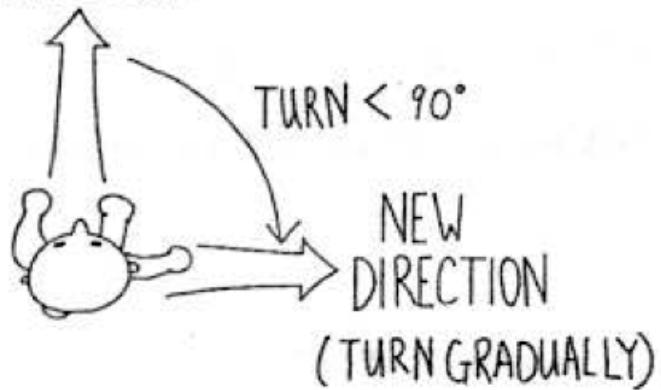
Super Mario 64 Video

[YouTube Link](#)

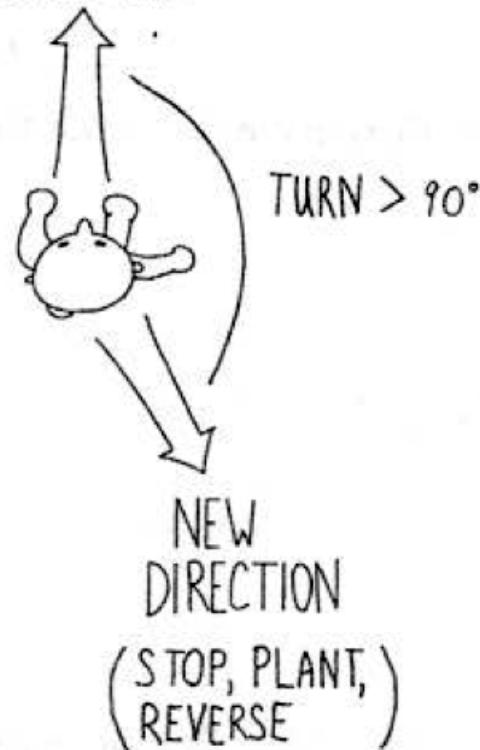




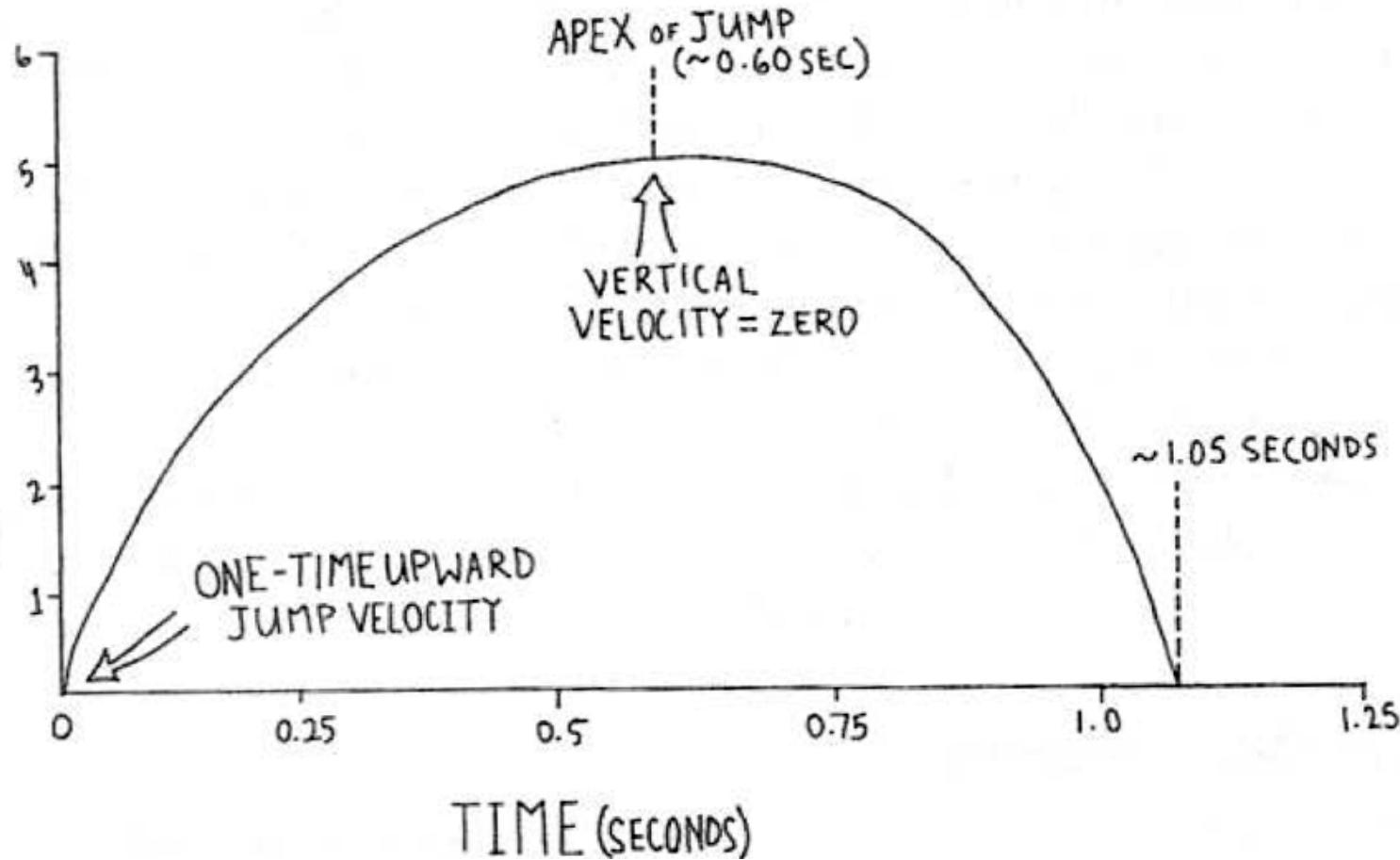
CURRENT
DIRECTION



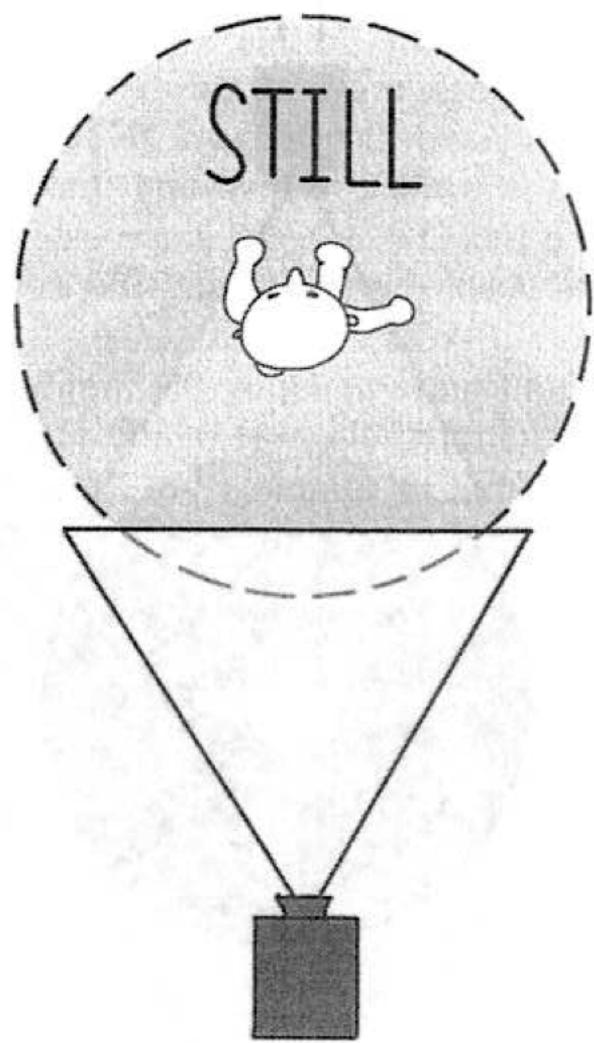
CURRENT
DIRECTION



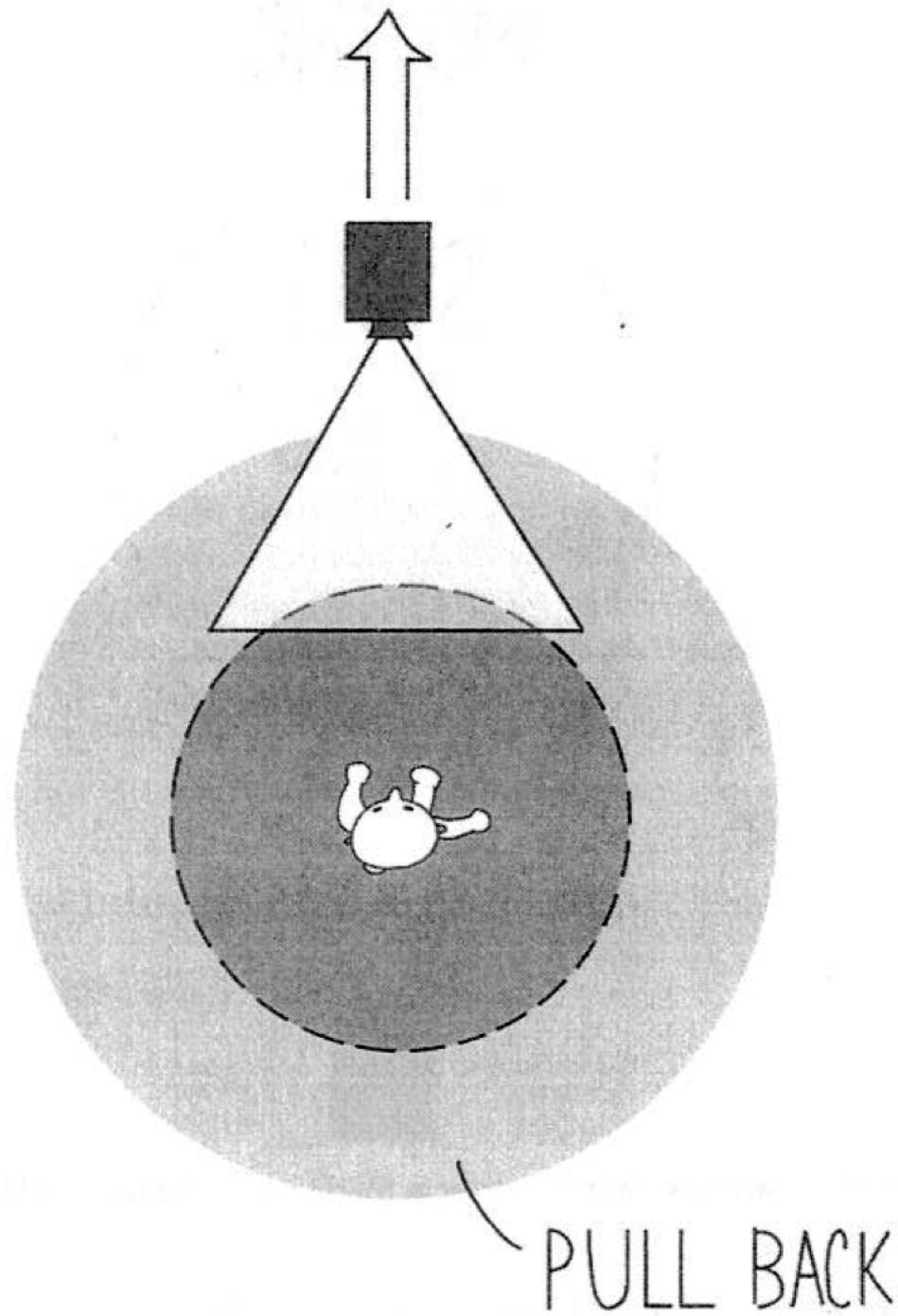
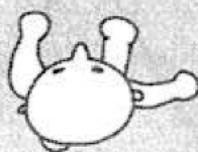
HEIGHT
(IN MARIOS)



MOVING



STILL



PULL BACK



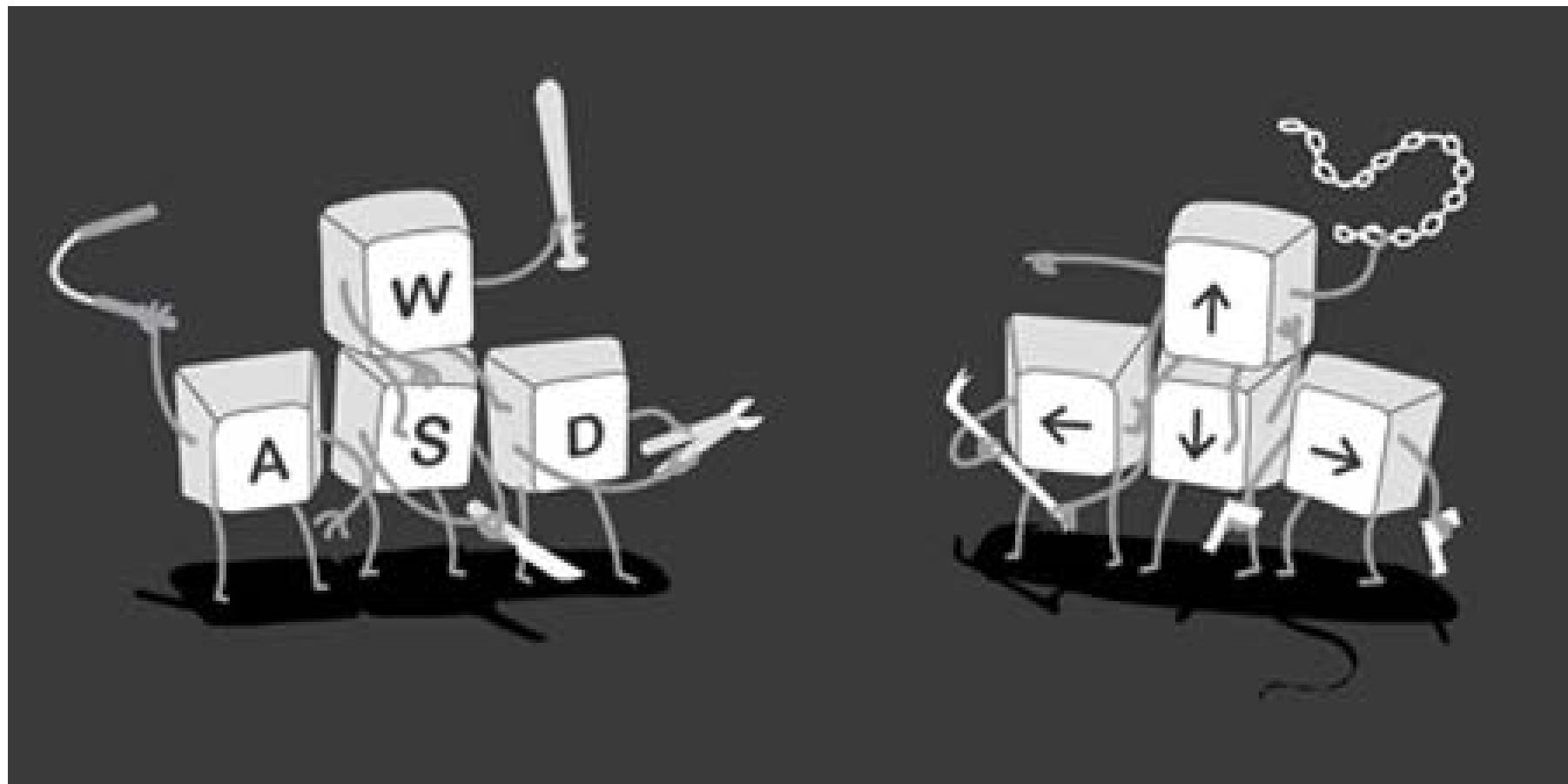
Meanwhile...





Quake 3 Video

[YouTube Link](#)





Starcraft Video

[YouTube Link](#)











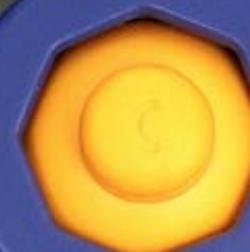
NINTENDO
GAMECUBE

START/PAUSE

A

X

Y









120 x 4





STEEL BATTALION CONTROLLER :: NEW COLORS



Late Era







Set Up Internet Connection

What is the password for the Wi-Fi network?

mk506wireless

Hide Password

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	'
z	x	c	v	b	n	m	,	.	?
▲	@#:	▲	Space	▼	◀	▶	✖	✖	✖
▼	▲	◀	▶	✖	✖	✖	✖	✖	✖

Done

OK

Enter Back



















Use the
Wii Remote to
control Mario.

Touch the
GamePad to place
Boost Blocks.





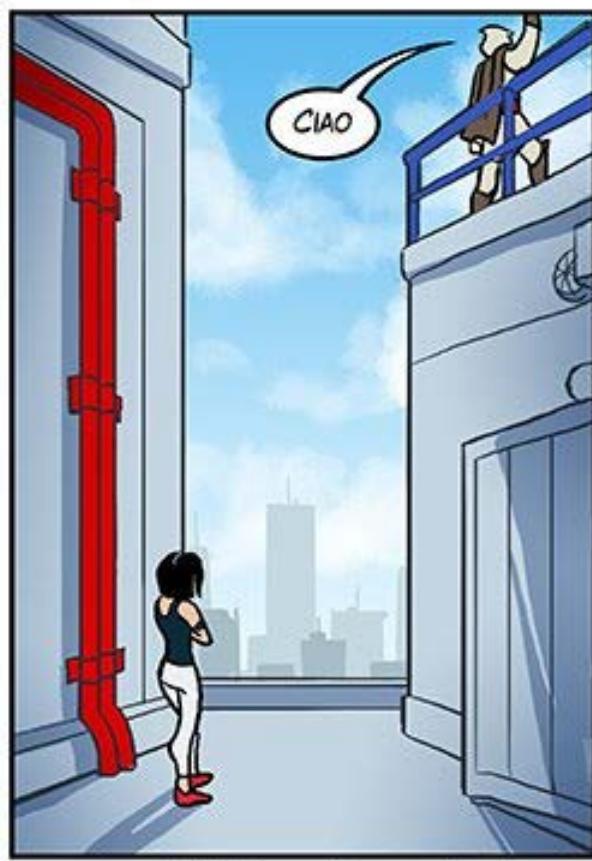
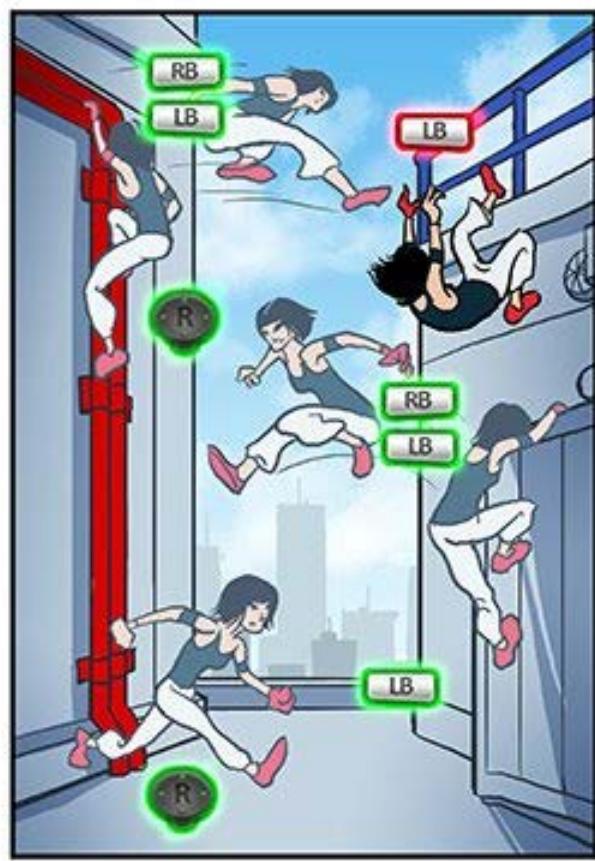
Kinect Tech Demo

[YouTube Link](#)



XBOne Gestures Video

[YouTube Link](#)





Assassin's Creed 3 Tech Video

[YouTube Link](#)



Flower Video

[YouTube Link](#)



Octodad Video

[YouTube Link](#)



FAVORITES

ALL

WEAPONS

APPAREL

POTIONS

SCROLLS

FOOD



Ale



INGREDIENTS

BOOKS

KEYS

MISC

Ale

Ale

Cabbage

Elder Cheese Wedge

Elder Cheese Wheel (3)

Goat Cheese Wedge (2)



ALE

WEIGHT 0.5

VALUE 5

Restore 15 Stamina. Stamina regenerates 30% slower for 30 seconds.



