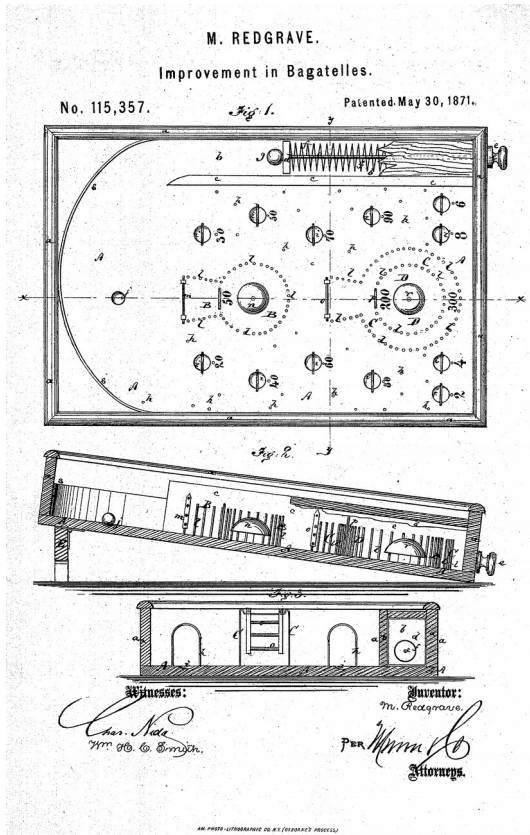


# Videogiochi, informatica per l'intrattenimento

Storia dell'Informatica  
a.a. 2023/24

- Videogioco, un tentativo di definizione
- Alcuni titoli storici (alcuni!)
- L'epica stagione degli home computer
- La cultura dei videogiochi
- La dimensione di un mercato



## ◆◆◆ BINGO ◆◆◆

A GAME  
OF  
SKILL



5 SHOTS  
FOR  
1c

Dimensions  
24x16x7 inches

Shipping Weight, 24 lbs.

A fascinating game chock full of fun and thrills in a well constructed cabinet of solid walnut. A simple mechanical construction made of the best and most suitable materials.

A thousand machines already in operation in Chicago and making real money for the local operators.

**SAMPLE PRICE \$16.50 (F. O. B. Chicago)**

*Write for quantity prices*

To the operators comes an important announcement from D. Gottlieb & Company that production on their Bingo Machine has reached a stage whereby they can fill all orders promptly, and they ask that the operators place their orders with their nearest distributors, who are as follows:

BINGO NOVELTY COMPANY,  
102 So. Trumbull Ave., Chicago, Ill.  
ATLANTA AMUSE U COMPANY,  
217 Georgia St., S. W., Atlanta, Ga.  
AUTOMATIC AMUSEMENT COMPANY,  
229 W. 7th St., Los Angeles, Calif.  
68 Linden Ave., Memphis, Tenn.  
IRVING BROMBERG,  
7 Miami Court, Brooklyn, N. Y.

F. C. EWING COMPANY,  
116 E. 15th St., Fort Worth, Texas.  
RENEY & SONS,  
506 E. 10th St., Chicago, Ill.  
SILENT SALES COMPANY,  
209 Gorman Bldg., Minneapolis, Minn.  
VENDING MACHINE COMPANY,  
109 Franklin St., Fayetteville, N. C.

## D. GOTTLIEB & CO.

4318-24 W. Chicago Avenue

CHICAGO, ILL.

**GUARANTEE:** To refund full purchase price if dissatisfied after 10 day trial.



- Goldsmith & Mann
  - Si spara
  - Sagoma meccanica
  - Proiettile elettronico
  - Collisione meccanica
  - Esplosione elettronica
  
- Video sì, programma no
  - Meccanica
  - Elettronica analogica
  - Interazione in tempo reale

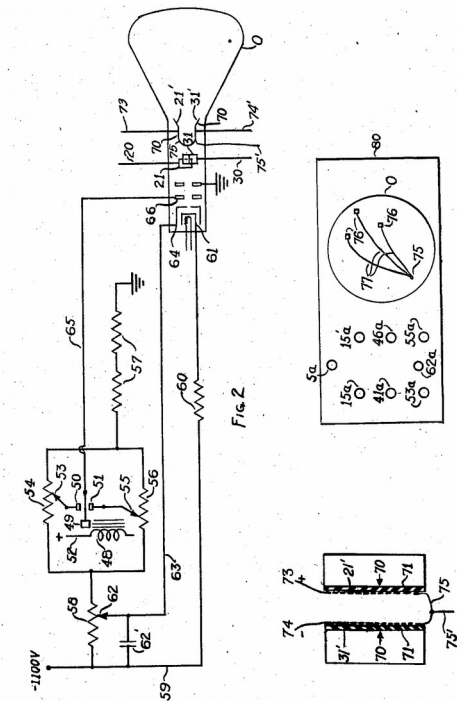
Dec. 14, 1948.

T. T. GOLDSMITH, JR., ET AL  
CATHODE-RAY TUBE AMUSEMENT DEVICE

2,455,992

Filed Jan. 25, 1947

2 Sheets-Sheet 2



Thomas S. Goldsmith, Jr.  
Earle Ray Mann, INVENTORS

BY  
Charles W. Mortimer

- Alan Turing & David Champernowne
  - Programma per giocare a scacchi
  - Eseguito “su carta” da Turing e Champernowne
  - Circa mezz’ora per ogni mossa
  - Perse con Alick Glennie
  - Vinse con la moglie di Champernowne
  
- Algoritmo sì, programma no, video nemmeno
  - Manca proprio il calcolatore, in effetti
  - Un tentativo di implementazione sul Mk1

## □ Canadian National Exhibition

- Josef Kates (UTECH)
- Tic-tac-toe
- Per il pubblico
- Macchina dedicata

## □ Un arcade?

- Programmato
- Grafico
- Interazione a turni



## □ Dietrich Prinz

- Manchester/Ferranti Mk1
- Problemi di scacchi del tipo “matto in due mosse”
- Programmato, su un calcolatore generico
- Risoluzione in 15-20’, con ingresso su nastro
- A “giocare” è in realtà solo il calcolatore...

## □ Sempre Prinz

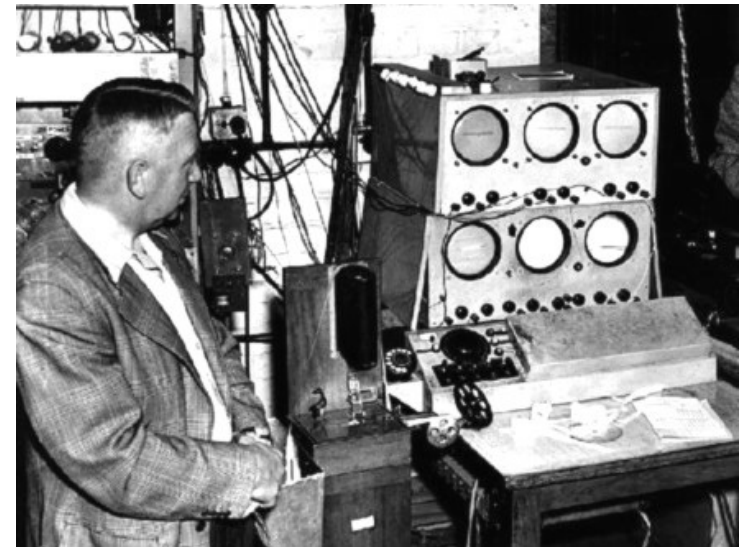
- Ancora su un Ferranti, ma a Roma (1955/56)
- Musikalisches Würfelspiel

- Il Nim della Ferranti
  - Per il Festival of Britain
  - Poi al Berlin Industrial Show
  - John Bennett
  - Buona matematica
  - Gran divertimento
  
- Antenato elettromeccanico
  - Westinghouse Nimatron
  - New York World Fair, 1940
  - US Patent 2215544

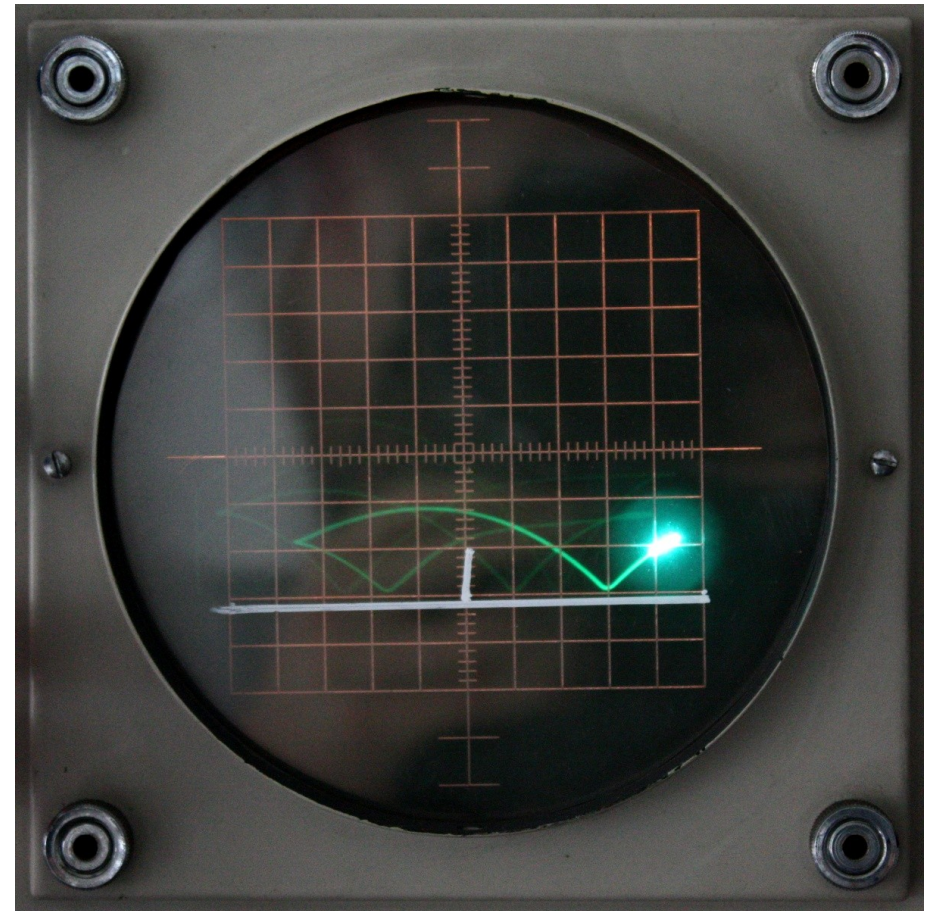




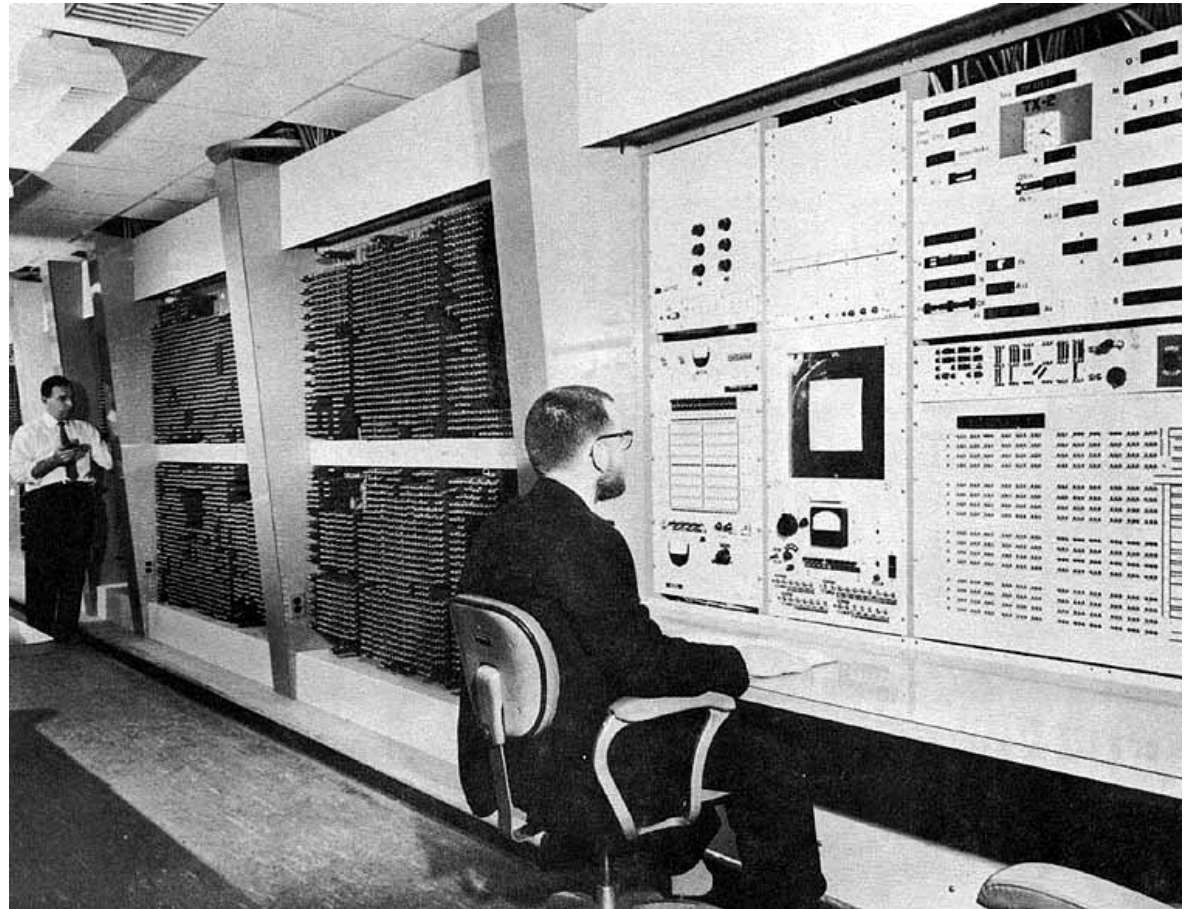
- Sull'EDSAC di Cambridge
  - Alexander S. Douglas
  - Dottorato su interazione uomo-calcolatore
  - Tubi catodici per visualizzare le memorie (a ritardo)
  
- Caratteristiche
  - Programmato
  - Grafico e a pixel!
  - Interfaccia dedicata
  - Interattivo, ma a turni

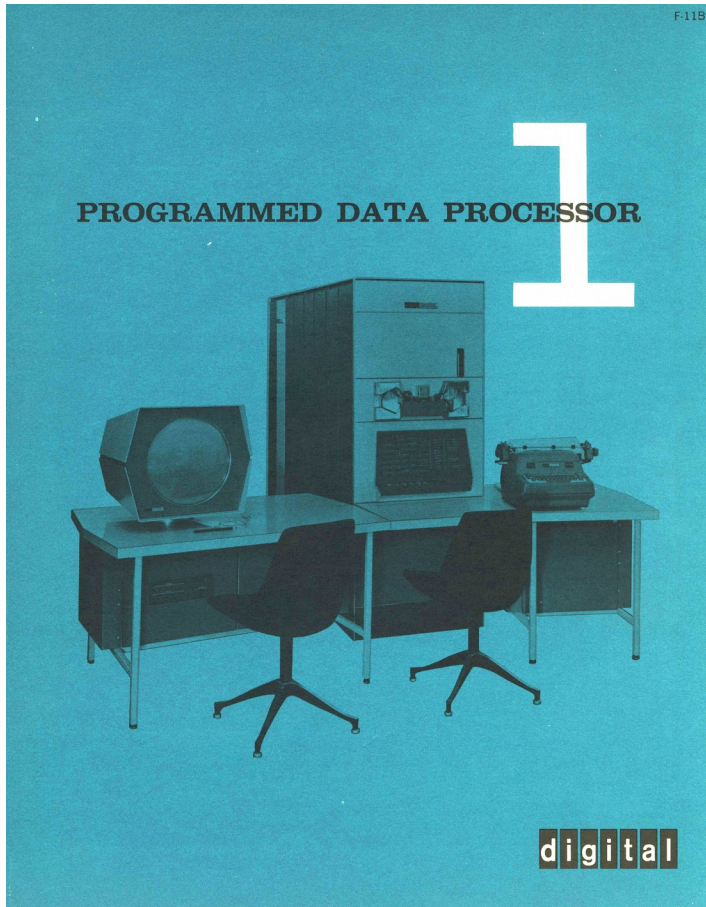


- William Higinbotham
  - Donner Model 30
  - Per il pubblico del Visitor Day al Brookhaven Nat. Lab.
  - Allestito due volte
- Niente programma
  - Multigiocatore, suono
  - Tempo reale
  - Ma analogico



- MIT TX-0/2
  - Wirlwind project
  - Interazione in tempo reale, grafica
  - AN/FSQ-7
- Giochi
  - Maze
  - Tic-tac-toe (!)





- Hingham Institute (finto)

- Steve Russell,  
Martin Graetz,  
Wayne Wiitanen

- Il Gioco

- Grafico
- Programmato
- Interattivo
- Fisica mediata
- Multigiocatore
- In tempo reale



- Requisiti per la demo perfetta (Hingham Inst.)
  - It should demonstrate as many of the computer's resources as possible, and tax those resources to the limit
  - Within a consistent framework, it should be interesting, which means every run should be different
  - It should involve the onlooker in a pleasurable and active way - in short, it should be a game

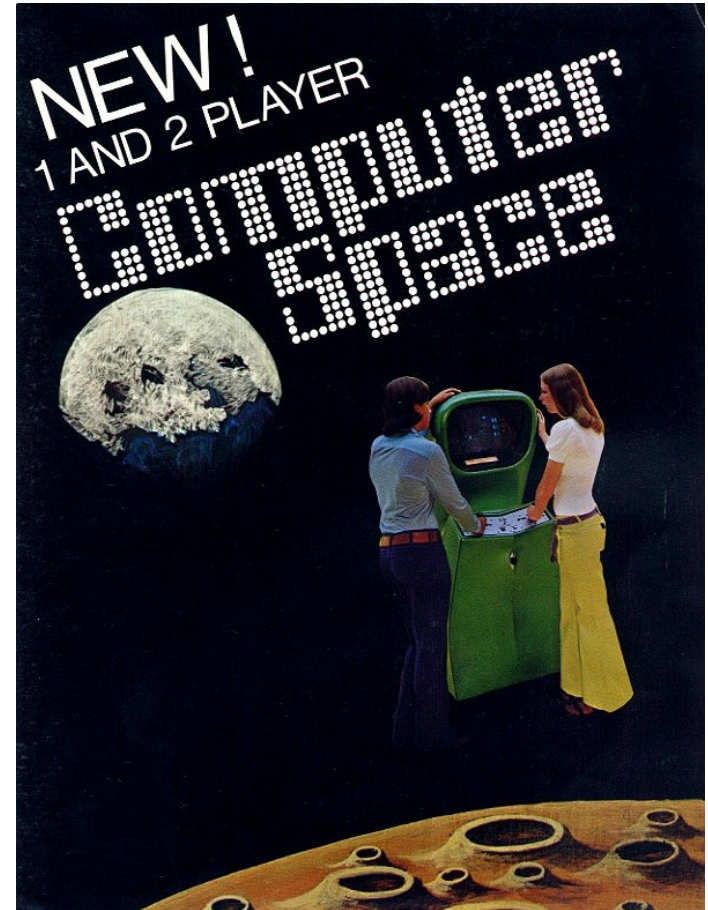
- Su un PDP 11/20
  - Solo a Stanford
  - 10 c a partita  
(25 per 3 partite)
  - Multiterminale
  - 8 anni di servizio







- Nutting Associates
  - Nolan Bushnell, Ted Dabney (prima di Atari)
  - Primo tentativo sul Data General Nova
  - Poi hw dedicato
  - In sala giochi
  - Ma troppo complicato per i bar



- Un marchio notevole
  - Allan Alcorn,  
Nolan Bushnell,  
Ted Dabney
  - In sala giochi
  - Sofisticato, ma intuitivo
  - Grande successo
  - Causa con Magnavox
- Di nuovo niente programma



- Un lungo progetto
  - Dal 1966
  - Ralph Baer, William Harrison, William Rush
  - Domestico
  
- Niente programma
  - Elettronico
  - Logica nelle cartucce

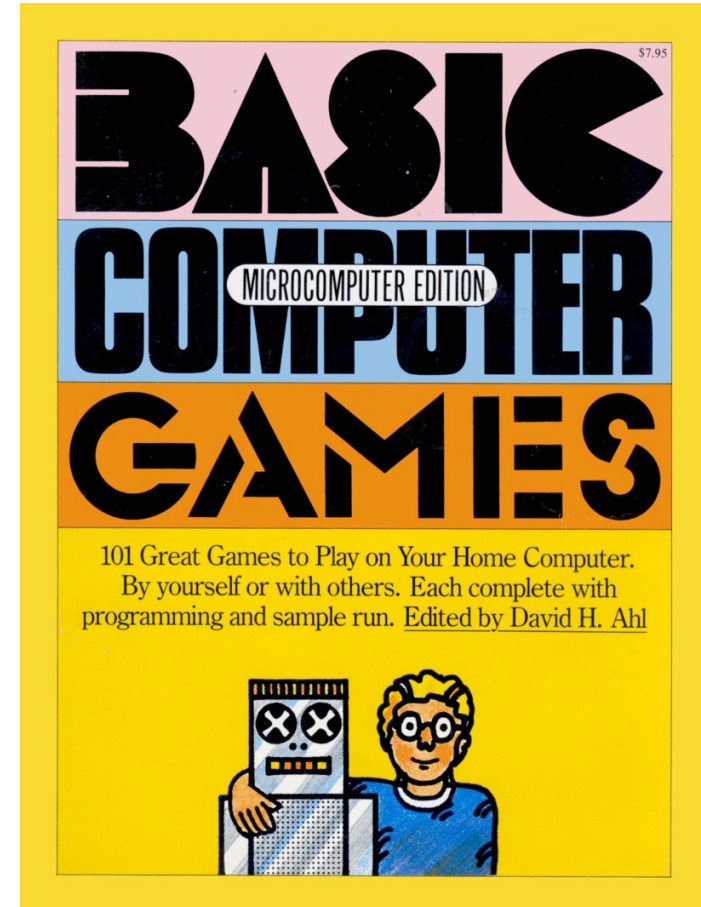


## □ 101 Basic Computer Games

- 1° ed. 1973, Digital
- 2° ed. 1978
- David Ahl
- La newsletter
- Creative Computer

## □ Le macchine

- Digital PDP 8 e succ.
- Data General Nova
- HP 2100



- READY!
- Programmabili subito
- BASIC,  
ma solo per iniziare
- Non solo C=64



- Un motto di Jack Tramiel
- Una storia interessante
  - Imprenditore nel settore delle macchine da ufficio
  - Fonda la Commodore nel 1954, a Toronto
  - Nel 1975 incontra Chuck Peddle, il 6502 e il KIM
  - Con il capitale di Irving Gould compra MOS Tech
  - Nel 1977 inizia con i PET/CBM
  - Nel 1980 entra nelle case con il VIC-20
  - Nel 1982 arriva il C=64

## □ Oltre al C=64

- Texas Instrument TI/99, dal 1979, 16 bit
- Sinclair ZX 80, 1980, il primo di una stirpe inglese
- Sinclair ZX Spectrum, 1982, l'antagonista
- Gli MSX, dal 1983, una vana santa alleanza
- E poi Mattel Aquarius (1983), IBM PCjr (1984), gli altri Commodore: Max/10, 16, 116, Plus4, 128

## □ Caratteristiche tipiche

- Versati per i giochi, come le console (Atari 2600, NES)
- Paragonabili ai fratelli “maggiori” (Apple II)
- Spesso più sofisticati

- Il BASIC di default (Microsoft)
  - Non eccezionale, meglio, per dire, il Simons' BASIC
  - Lento, un interprete in fin dei conti
  - Comunque un bel giocattolo per cominciare
- Poi Assembler, Forth, C, Pascal...
- Accesso alle funzioni avanzate
  - VIC-II e SID, i chip per grafica e sonoro
  - Attraverso locazioni di memoria
  - POKE <locazione>,<valore>



- Activision
- C=64, Apple II, IBM PC...
- The Editor
  - + SceneMaker
  - + SpriteMaker
  - + MusicMaker
  - + SoundMaker



- Shoot'em up Construction Kit  
Sensible Software
- Jonathan Hare  
Chris Yates
- C=64  
Amiga  
Atari ST



- Tecnologia
  - Da sempre i calcolatori sono stati sfruttati per giocare
  - Tuttora un settore tecnologicamente interessante
- Industria
  - Hardware, software, merchandising
  - In USA ha sorpassato cinema (2005) e musica (2007)
- Riferimenti culturali
  - Derivazioni, contaminazioni, citazioni
  - Dimensioni narrative nuove: partecipazione diretta
- Utili a incuriosire e oltre (gamification)

- Prima apparizione nel 1981, Donkey Kong
  - Shigeru Miyamoto
  - Protagonista, ma senza l'onore del titolo
- Una trama
  - Fra i primi giochi ad avere una storia
  - Originariamente pensata per Popeye, Olive e Bluto
- Una identità
  - Jumpman, Mr. Video, infine Mario
  - Carpentiere, poi idraulico italoamericano di New York
- Since '81. And still jumping!

- Il crash del 1977, delle home console
  - Magnavox Odyssey, Fairchild VES, Coleco Telstar
- Il successo dell'Atari 2600 (già VCS, 1977)
- Il crash n. 2 del 1983, di arcade, console, software
- La ripresa made in Japan del NES (1983)
- La concorrenza degli home computer
- Il dominio di Playstation (1994) e Xbox (2001)

- Stime sul numero di PC (veri), nel mondo
  - Nel 2002, 1 miliardo
  - Nel 2007, 2 miliardi
  
- Un mercato frammentato
  - VIC-20, il primo a superare il milione
  - C=64, il più venduto di sempre 12-17 milioni



## □ Console

- PS (1994) > 400M, PSP (2004) > 100M
- Xbox (2001) > 200M
- Nintendo GameBoy (1989), DS (2004), Wii (2006)...

## □ Titoli

- SMario (1981) > 900M, Pokemon (1995) > 300M
- Call of Duty (2003) > 300M

## □ Per confronto

- Hw, iPhone (2007) 1.5G – Pippin (1996) < 0.04M
- Sw, MS Office (1990) 1G utenti nel 2012
- HP and the Philosopher's Stone > 100M

- Cos'è “arte”
  - Qualcosa capace di esprimere idee, impressioni, sentimenti *oltre* l'oggetto stesso
  - Incluse le provocazioni, i *ready-made*...
  
- Posizioni varie sui videogiochi
  - Come il bingo o il cricket, non sono arte
  - Ci può essere arte nei componenti di un videogioco
  - 2006, a Miyamoto l'*Ordre des Arts et des Lettres*
  - 2011, Smithsonian, *Art of Videogames*, con polemiche
  - 2012, il MoMA acquisisce 40 videogiochi famosi



- Trame complesse a cui il giocatore partecipa
  - Da Zork ai titoli di Bethesda, CD Projekt, Rockstar G.
  - Da spettatori a protagonisti, azione ed effetti ma anche scelte, di trama, etiche ed emotive
  - La grande eredità dei giochi da tavolo e di ruolo
  - Una narrativa più coinvolgente di letteratura e cinema
  
- Ma c'è anche chi dice
  - Story in a (video)game is like a story in a porn movie, it's expected to be there, but it's not that important  
*John D. Carmack II, cofond. id Software (Doom, Quake...)*

OggiSTI n. 260, A. Cateni, L. Montagnani

## The Name of the Game is Death Race



THOUSANDS of pedestrians are killed and injured each year by cars, and safety experts everywhere are doing their best to diminish the slaughter.

In view of their dedication to saving lives, it's understandable that their concern is turning into outrage today — because of a popular new electronic game that actually teaches a motorist how to kill a pedestrian.

The game is called "Death Race," and it's one of the hottest-selling coin-operated games in the country today.

Manufactured by Exidy, Inc. in Mountain View, California, "Death Race" can now be found in amuse-

ment parks, arcades, taverns and pool halls. Here's how it works:

After inserting a quarter in the machine, two electronic, stick-figure pedestrians (called "Grenlins") zig-zag across a screen. The player depresses an accelerator and steers a wheel to run down a "Grenlin."

When a "Grenlin" is hit, a loud shriek is heard and the "Grenlin" is immediately replaced by a cross-shaped grave marker. The player then reverses his car, shifts back into a forward gear and proceeds to run down another "Grenlin."

Each "Grenlin" hit counts as 1 point. For 1 to 3 points, the player is a "Skeleton Chaser"; for 4 to 10 points, a "Bone Cracker"; for 11 to

20 points, a "Grenlin Hunter"; and for 21 or more points (are you ready for this?) an "Expert Driver."

Although "Death Race" is classified as "amusement," a lot of people are not amused by it.

Officer Richard Todd, a press spokesman for the Los Angeles Police Department: "A game like this does nothing to help road safety in this country."

Dennis Rowe, safety consultant for the Automobile Club of Southern California: "This game is sick, sick, sick. We're trying to teach drivers how to take evasive maneuvers on the road, like avoiding pedestrians."

"And here this morbid game comes along and encourages people to develop the opposite skill — how to hit people."

Gilbert Kitt, president of Empire Distributing, Inc., a large, arcade-game wholesaler in the Chicago area: "I've decided to stop distributing it. It's too macabre."

Marriott's Great America is a huge amusement park in Gurnee, Illinois. Group Director of Marketing Richard M. Quinn reports:

"... we removed the game right after Mr. Marriott received the first complaint. The game was purchased in a lot and we certainly agreed that it was not in keeping with the taste of our theme park."

Finally, the strongest and most informed indictment of "Death Race" comes from Dr. Gerald Driessen, behavioral scientist and manager of the National Safety Council's Research Department:

"From a psychological and behavioral viewpoint, the device is definitely negative. It capitalizes well on the basic principles of mechanical games by capturing one's attention through loud sound, and the need for rapid decision-making and

immediate feedback of results.

"But 'Death Race' is not a 'game' and is certainly not humorous, as its promoters maintain.

"The objective is to hit symbols of persons and, in fantasy, crush and kill them. It is another gross example of commercial gain based on the aggressive and destructive tendencies in people. The shrieks emitted when a figure is hit add to its macabre tastelessness.

"One of its most insidious and probably unrecognized characteristics is its shift from imaginary visual images of destruction, as you have in TV violence, to actual behavioral actions taken by the player. The person is no longer just a spectator, but now an actor in the process of creating violence.

"Both skyjackings and robberies have followed rather closely the scripts of earlier TV dramatizations. The proportion of the audience so affected may be quite small, but some are affected in ways that lead to criminal action.

"Will this happen here, too, where there is even more direct involvement of specific sensory input, decision-making processes and muscular output?"

"The device has gained popularity among children. As parents, can we not come up with ways of channeling the aggressive impulses of children into more constructive channels of expression?"

"I think the device adds to an already widespread 'war and killing' mentality. It shifts a violent tendency into a form of behavioral action that carries no negative consequences for the actor.

"It plants the seed of disrespect for life, in all forms, not just in the area of motor vehicle operation and highway safety. It can potentially have negative effects on young and old, normal and psychopathic, drivers and nondrivers.

"I think the current device is gross, and shudder to think of what will be next if this one is not defeated by public opinion." ■

### Back Pain (continued from page 7)

is longer than the other, a frequent and unnoticed deformity in homo sapiens.

#### 5. Get support while driving and sleeping

Driving puts great strain on the back. In a recent Connecticut study, Dr. Jennifer Kelsey of Yale University found that drivers are more likely to suffer from an acute herniated lumbar disc than those who don't drive. Men who spend at least half their working day driving are three times more likely to develop a herniated disc than those who don't hold such jobs.

"The drivers probably do not have adequate support for their lower backs," Dr. Kelsey says. "They may also be affected by the continued vibration of the vehicle and the mechanical stress of starting and stopping. And their legs are extended to the pedals, instead of resting on the floor."

Back experts recommend that you sit with the small of your back pressed against the back seat cushion. A firm, 1½-inch-thick pillow behind the small of your back may help. Or you can buy an orthopedic back support for this purpose. The Air Force issues an air-inflated lumbar support for pilots that can be found in military surplus stores. It is excellent for driving.

Move the seat up so that you can reach the pedals and the steering wheel easily without straining forward. Keep your head and shoulders erect. If you lean forward, you'll develop pains in your neck and back.

Never drive more than one or two hours at a stretch. Get out of the car and move around every chance you get. Shrug your shoulders to loosen cramped neck and shoulder muscles. Sit on something such as a picnic bench, grasp your ankles and pull your head and shoulders down between your knees.

Proper back support is just as im-

portant in bed, since you spend almost a third of your life there. Get a really good, firm mattress. A soft mattress can be murder on your back.

When sleeping, you want your back to assume a relaxed, natural position. Experts often advise against sleeping flat on the stomach, because it may promote swayback or lead to a stiff neck. If you sleep on your back, use a thin pillow (or none) under your head, and place a pillow or folded blanket under your knees to relieve the constant pull on your lower back muscles. When sleeping on your side, use a pillow thick enough to keep your head in line with your spine.

#### 6. Relax

Tension is one of the most important causes of backache. A traffic jam, a blaring radio or TV, a crying baby, a tight schedule—your life is crowded with irritations that jangle your nerves and tighten your muscles. Emotional problems create tension, too—trouble at work or an unsatisfactory marital life.

Exercise can do wonders for tension. It's hard to worry when you're jogging or bicycling. And the physical exertion makes you breathe deeply, perks up circulation and loosens tight muscles.

Take a few minutes several times a day to practice relaxation exercises. Let your muscles go limp, with your head drooping forward. Lie down if possible and relax all the muscles of your body, starting at the feet and working up to the neck, the tongue and the forehead.

Creating the right mental attitude is important, too. Try to ignore petty aggravations, or look for humor in a situation. Concentrate your energies on one task at a time, and quit trying to do everything at once. Avoid situations that make you tense. If necessary, make changes in your life to root out major sources of tension. Not only will you have fewer backaches, you'll also live longer. ■

- Una caratteristica dei videogiochi
  - Luoghi del gioco, antagonisti, mosse, conseguenze
  - Schemi, trucchi e scorciatoie, dal *Furrer trick* in poi
  - Sorprese ed *easter eggs*
- Un dialogo sui generis
  - Da una parte sceneggiatori e programmatori
  - Fantasia e mestiere, quando intenzionali
  - Caso, quando bachi o conseguenze algoritmiche
  - Dall'altra i giocatori
  - Esperienza, studio e disciplina

- Argomento di discussione
- Spettatori, come gli altri sport
  - Gameplay footage
  - Walkthrough
  - Speed run
- Lavori (oltre che sviluppo)
  - Prove, recensioni, performance
  - Costruzione e vendita di oggetti e personaggi
- Mod, la più creativa delle esperienze di gioco

## □ Web serie

- Kickstarter (75k → 270k)
- 9+6+6 episodi, dal 2012 al 2014
- Rimontati in un film



## □ In un prossimo futuro

- Si studia per diventare giocatori professionisti
- Da “Fame” in poi, un genere classico
- Rivisitazione originale e di mestiere
- Con le sue chicche (una per tutte: Chiba e Hanzō)

- T. Donovan, “Replay: The History of Video Games”, Yellow Ant, 2010 (ex. su Wired)
- G.A. Cignoni, L. Cappellini e T. Mongelli, “Games from Engaging to Understanding”, atti di ICEC 2015
- G.A. Cignoni, T. Mongelli, C. Colosimo, “Effetto vecchi videogiochi”, PaginaQ, 2014.10.05
- G.A. Cignoni, “Le armi del guerriero”, PaginaQ, 2014.11.02