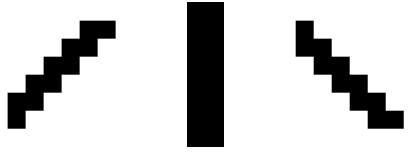
The History of Atari



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Penguicon 2020

What we’ll cover

- The origins of Atari
- The rise of Atari
- The time Steve Jobs worked at Atari and got Steve Wozniak to do his work for him
- The excesses of Atari
- Atari’s sale to Warner Communications
- The spin-offs (Activision, Imagic, etc.)
- The Video Game Crash
- Atari’s sale to Jack Tramiel and some of the aftermath
- Afterword and additional resources

What we won’t cover

- Many of the stories from the developers at the time (not enough time, but will give references)
- Atari Home Games like Stunt Cycle, Video Music, Video Pinball, etc.
- The Atari Portfolio, even though it was a cool machine.
- A deep history of the Atari ST
- Atari Coin-Op / Atari Games, save for a few notable games
- Any Atari game development in great detail (save for a couple of notable exceptions)
- Atari’s contests (Swordquest)
- Atarisoft and Tengen

What we'll conveniently ignore

(because it's just a bunch of folks cashing-in on a beloved brand and that's boring compared to the real thing)

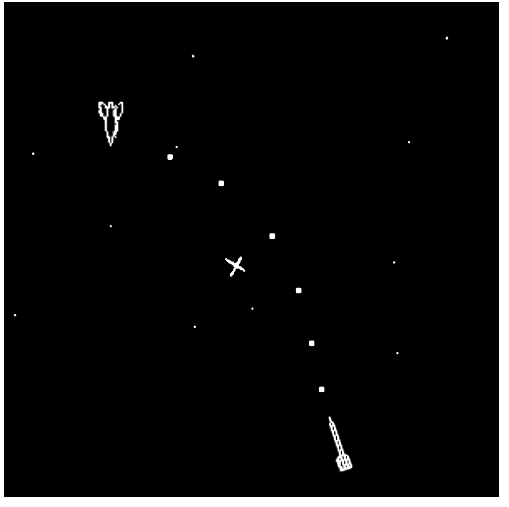
- Atari Corporation's sale to JTS, Hasbro, Infogrames and so on
- Atari Games sale to Namco, back to Time Warner, Midway, and so on
- The various Atari bankruptcies, reorganizations, and what-not since the 1980s
- The "Atari Estate" (my term for the company handling branding of merchandise and other "ventures". Believe me, it's not pretty).
- Whatever the hell the Atari® VCS™ is.

Our story begins...

The 1960s

By Kenneth Lu - Spacewar!, CC BY 2.0, https://commons.wikimedia.org/w/index.php?curid=2060215

By Joi Ito from Inbamura, Japan - Steve "Slug" Russell manipulating PDP-1, CC BY 2.0, https://commons.wikimedia.org/w/index.php?curid=2099682



https://en.wikipedia.org/wiki/Spacewar!

Nolan Bushnell

Ted Dabney

Ted Dabney

- Engineer at Ampex.
- Office-mate of Nolan Bushnell.
- Convinced by Nolan to start up Syzygy with Nolan to produce “Computer Space”, a clone of Spacewar!.
- Is often overshadowed by Nolan when talking about the founding of Atari, but was instrumental in helping get Atari off of the ground.
- Fan of the game Go.

Nolan Bushnell

- Originally from Utah.
- Worked at an amusement park for a few summers. Got interested in coin operated machines there.
- Was interested in making “adult” money at the age of 10.
- Charismatic, fast talker. More salesman than engineer but very persuasive and always looking to reinvent himself.
- Huge fan of the game Go.
- Had visions of making a pizza place with animatronics back when he and Ted Dabney could barely afford a pizza.

Syzygy (alignment of clestial objects)

- Formed as a partnership to work on what would become Computer Space.
- Named by Larry Bryan, another developer who would leave mid-way in the project.
- Bushnell and Dabney contributed $100 each to form the company.

Data General Nova

- 16 bit computer that sold for $4,000 (about $25,000 in 2019 dollars).
- Work on the Spacewar! Clone continued, but the computer wasn’t powerful enough to do a faithful implementation of Spacewar!. It couldn’t refresh the screen quickly enough to make a playable game.
- Abandoned in favor of custom hardware.

Nutting Associates

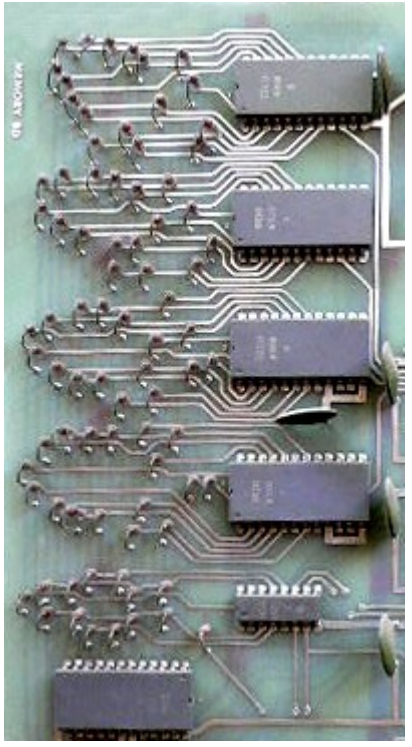
- Nutting had a “Computer Quiz” game released in the late 1960s, and was looking for their next big hit.
- Bushnell approached them with the idea of building their clone of Spacewar!
- At this point the game used a cheaper TV for a monitor and displayed one point on the screen that moved.

Competition

- Six miles away Bill Pitts and Hugh Tuck were making a Spacewar! Coin-operated game, but their prototype was a $14,000 DEC PDP-11/20 and a $3,000 vector display.
- Nolan, Bill, and Hugh met over coffee to discuss their different games.
- Nolan was relieved that their set-up was so expensive. It meant their machine would be too costly for the arcade market.

Nutting Associates

- Nolan convinced Ted Dabney to leave Ampex to join Nutting to help build their Spacewar! Clone in 1970.
- Lots of amazing engineering went into the game, including a clever four-position “ROM” image for the ship, and rudimentary AI.
- Nolan built the case out of modeling clay and had it manufactured.
- 1,500 units were made, which was optimistic considering hit games hit 2,000 units manufactured.




ROCKET
SAUCER
TIME
25¢
QUARTER
COIN RETURN
COMPUTER SPACE
ROTATE
ROTATE
START GAME
FIRE MISSILE
THRUST
NUTTING ASSOCIATES
MT. VIEW, CALIF.
syzygy engineered

Computer Space

- Did well around college campuses and technological areas
- Did poorly in other locations (too complex)
- “While this was a commercial success, making over US$1,000,000 (equivalent to about $6,112,000 in 2019), it was a disappointment to Nutting, who had been hoping for a large-scale success like Computer Quiz.”

Syzygy Engineering to Atari

- Nolan Bushnell and Ted Dabney left Nutting Associates to create Syzygy Engineering
- “Bushnell later stated that he was encouraged by the success of Computer Space in regards to future game ideas, as he had never before created something that made so much money, and additionally felt that his time at Nutting gave him confidence in running his own company because he "couldn't screw it up more than they did"” (source: Wikipedia)
- Name was too close to another company, so they had to change the name
- Nolan was a huge fan of the game Go, and “Atari is a term used in Go for a situation where a stone or chain of stones has only one liberty, and may be captured on the next move if not given one or more additional liberties.” (source: Wikipedia)
- *(Note: Never call out Atari in your Go games. It’s considered rude to do so.)*

Atari is born

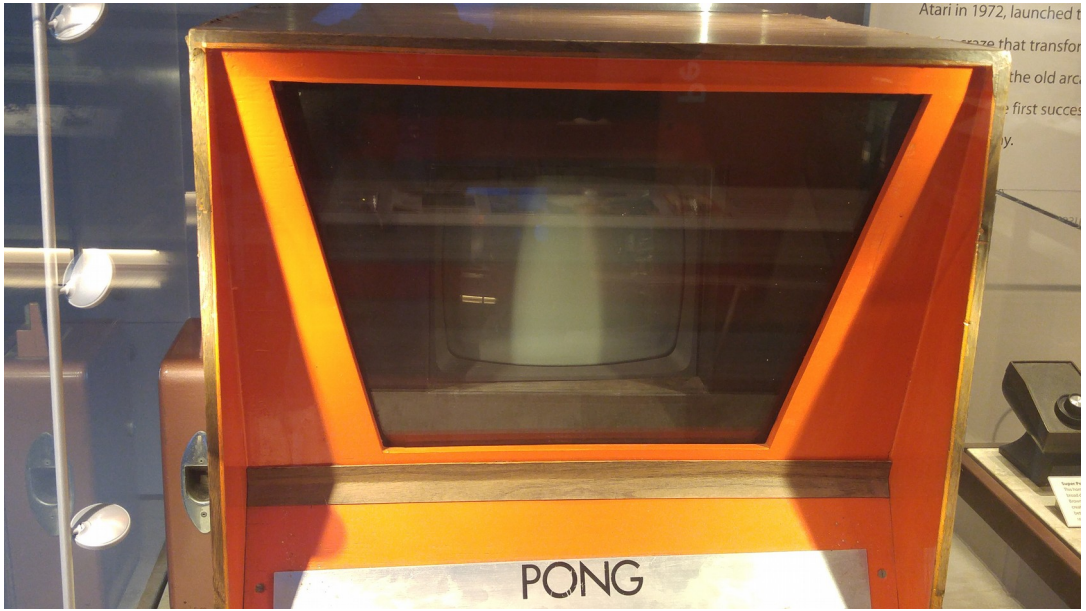
- Atari was incorporated in the state of California on June 27, 1972.
- Nolan had a contract with Bally to develop a driving game for them.
- Nolan envisioned Atari as an engineering-driven company (a true Aquarian-Age company).

Pong

- Given as a training exercise by Nolan to Al Alcorn (Though Nolan told Allan that it was a product for General Electric)
- Al Alcorn was an engineer at Ampex when Ted and Nolan worked there.

Pong is a hit!

- Prototype (right) is installed at Andy Capp's Tavern
- Bushnell and Alcorn placed the prototype on one of the tables near the other entertainment machines: a jukebox, pinball machines, and Computer Space.
- Al Alcorn receives a call from Gaddis (the bar's owner). The machine is malfunctioning two weeks after installation.
- Al discovers that the coin box is jammed full of quarters, causing the machine to fail
- Machine develops a following. People line up at the bar when it opens to play the game and then leave without buying anything else.



Pong in production

- Got a bunch of folks from the unemployment office to assemble machines
- Machines were slow to produce, about 10 a day, many of which failed quality testing
- Eventually Pong has several versions including Pong in a Barrel (a wine-barrel version that suffered from the wine barrels coming apart), Barrel Pong, an unlicensed Snoopy Pong, Puppy Pong, and a slew of others.

1973

Ted Dabney leaves

- Ted Dabney left Atari in March, 1973
- Felt he was left out of a lot of higher level meetings
- Discovered Nolan Bushnell patented his video circuit for Pong, and didn’t name him in the patent.

1974

Pong (home version)

- Code named “Darlene” after an Atari employee
- Al Alcorn and Harold Lee worked on a single-chip version of Pong in ‘74
- Shopped around at toy fairs
- Sears ordered 150,000 units

Pong explodes

- Multiple companies make Home Pong consoles, including Coleco, Magnavox, and more
- Nolan Bushnell ironically calls these folks Jackals, but Atari didn’t patent the chip in time so they could do little to stop them.
- Atari continues to innovate different games, including Video Olympics, Quadrapong, Pong Doubles, etc.

Ralph Baer (an aside)

- Ralph Baer came up with one of the first television paddle games called “Tennis”.
- (William Higgenbotham came up with the first electronic games to use a graphical display called “Tennis for Two” in 1958)
- Al Alcorn believes that Nolan knew about Ralph Baer’s Tennis prior to Al working on their version of Pong
- Nolan claims he played a similar paddle game back in college
- Ralph Baer and Magnavox later sued Atari in 1975 for patent infringement and won a settlement where Magnavox would gain the rights to Atari’s products for the next year. Atari delayed releasing any products for a year and witheld information from Magnavox’s lawyers.

Atari the Video Game Company

- Atari cranked out a bunch of TTL-style games, mostly racing and paddle-style games between 1972-1975
- Home Pong and its variants were Atari’s first foray into consumer electronics

Kee Games

- Atari formed a shadow company “Kee Games” headed by Nolan’s friend Joe Keenan in 1973
- Kee Games was formed as a wholly owned subsidiary so Atari could offer “exclusive” contracts with multiple pinball distrubutors at once
- Kee Games also hired several ex-Atari employees
- Kee Games was more profitable and better run than Atari so when the ruse was discovered in 1974 Kee Games was merged into Atari and Joe Keenan began running the business side of Atari, leaving Nolan to focus on the engineering side of Atari.

Steve Jobs and Steve Wozniak

- Steve Jobs answered an ad for game programmers
- Was well into his “fruitarian diet” which he believed made it so he didn’t smell or need deoderant (he was mistaken).
- Was tolerated by Atari’s staff, but eventually was moved to the night shift so nobody would have to work with him directly.

Steve Jobs and Steve Wozniak

- Steve Jobs was assigned Breakout
- Nolan had a challenge for developers to use as few chips as possible
- Steve Jobs gave the task to Steve Wozniak, who took to the task and made Breakout with even less chips (42 chips) over four sleepless nights.
- Steve Jobs told Woz that the award was $700 for designs of 50 or fewer chips, of which Woz received $350. The award was $5,000
- Steve Jobs was the breadboarder and tester while Woz did the design
- Atari ended up using 100 chips. Woz says it was because Atari’s engineers couldn’t understand the design. Another theory is because the design was too difficult to manufacture.
- Breakout influenced the dual paddles design of what later became the Apple II

Steve Jobs and Steve Wozniak

- Nolan was offered 1/3 of the formative Apple for $50,000. He declined.
- Apple used Atari parts to work on their own projects, which was not uncommon
- Atari helped Jobs and Woz secure parts. Later Apple would exhaust the supply chain for their own computers, starving the competition
- Jobs and Bushnell learned a great deal about business by talking with each other.

1974–1976

Atari Video Computer System

- Idea was initiated by Cyan Engineering (Steve Mayer, Larry Emmons), which became Atari's Grass Valley Think Tank (1974)
- Took advantage of the new 6502 and 6507 processors from MOS Technology (Chuck Peddle)
- Nolan negotiated exclusive deals with the chip manufacturers, fearing more copycat products that would cause delays or shortages.
- Joe Decuir was hired in 1975
- Jay Miner helped design the TIA (Television Interface Adaptor) onto a single chip.
- Steve Mayer was put in charge of the project.
- Project was named "Stella" after Joe Decuir's bicycle.

Atari Video Computer System

- Fairchild Channel F was the first home console with ROM cartridges (previous cartridges like the Magnavox Odyssey were simple jumpers for pre-programmed games)
- Fairchild’s entry into the home console market pushed Atari to try to get the VCS to market sooner, but Atari lacked the funds to do so.
- Nolan sold Atari to Warner Communications for $28 Million in exchange for $100 Million in new funding.

Atari Video Computer System

- Launched in 1977 for $199 and shipped with Combat and two joysticks (paddles were optional)
- Atari Sold 350,000 to 400,000 Atari VCS units in 1977.
- Sears recommended FCC approval, and the Atari VCS was heavily shielded to prevent RF interference
- “Heavy Sixxer” is the colloquial name for these early models, though there were two revisions
- Based on the 6507, a low-cost 6502 variant. Had 128 bytes of RAM, two player and two missile “sprites” (player missile graphics)

Early Atari VCS games

- Most were arcade game ports (some were classic games, most were not)
- Combat was what the original system was designed to do. Anything else was due to programmer skill
- What programmers got the Atari VCS to do in later games was astounding

Programming Culture at Atari

- Flexible hours (as long as the work got done)
- Very young developers (no time for family)
- Design, Development, and Testing was usually done by one developer. Rare to have a team of developers on a game.
- Most games took 6 months to create (for the VCS)
- Engineering was valued highly at Atari. Lots of “how did you do that?” lead to folks learning more about the systems they were designing for.
- A metric shit-ton of drugs and alcohol (akin to a frat party)
- Howard Scott Warshaw’s “Once Upon Atari” has a lot of these stories. Highly recommended.

Warner Communications

- Funded Atari prior to the VCS launch
- Didn’t understand Video Games in the slightest (thought they were like records that could generate money indefinitely)
- Didn’t care to understand the video game market as long as Atari kept making money (which it did)
- Didn’t give the programmers a cut of the revenue for the games (figured they were akin to studio musicians who just cranked out the hits).

Culture Clash

- Atari was a “west coast” company, with folks arriving to work with T-Shirts, Jeans, and sandals, and put their feet up on the desk. Also drugs.
- Warner was an “east coast” company that were very “button down”, proper, and didn’t care much for the hippie aesthetic of Atari. Also not keen on drugs, but whatever.

Nolan Leaves

- Nolan Bushnell left Atari in 1978 after being forced out over the lifespan of the Atari VCS and Warner’s closed software strategy
- Later founds Catalyst, which was an engineer-driven company (could incorporate in 45 minutes and start a new company)
- Was involved with Androbot, Car Navigation systems, Chuck E Cheese (along with Ted Dabney before the relationship fell apart), and a whole slew of other ventures.

Ray Kassar Takes Over

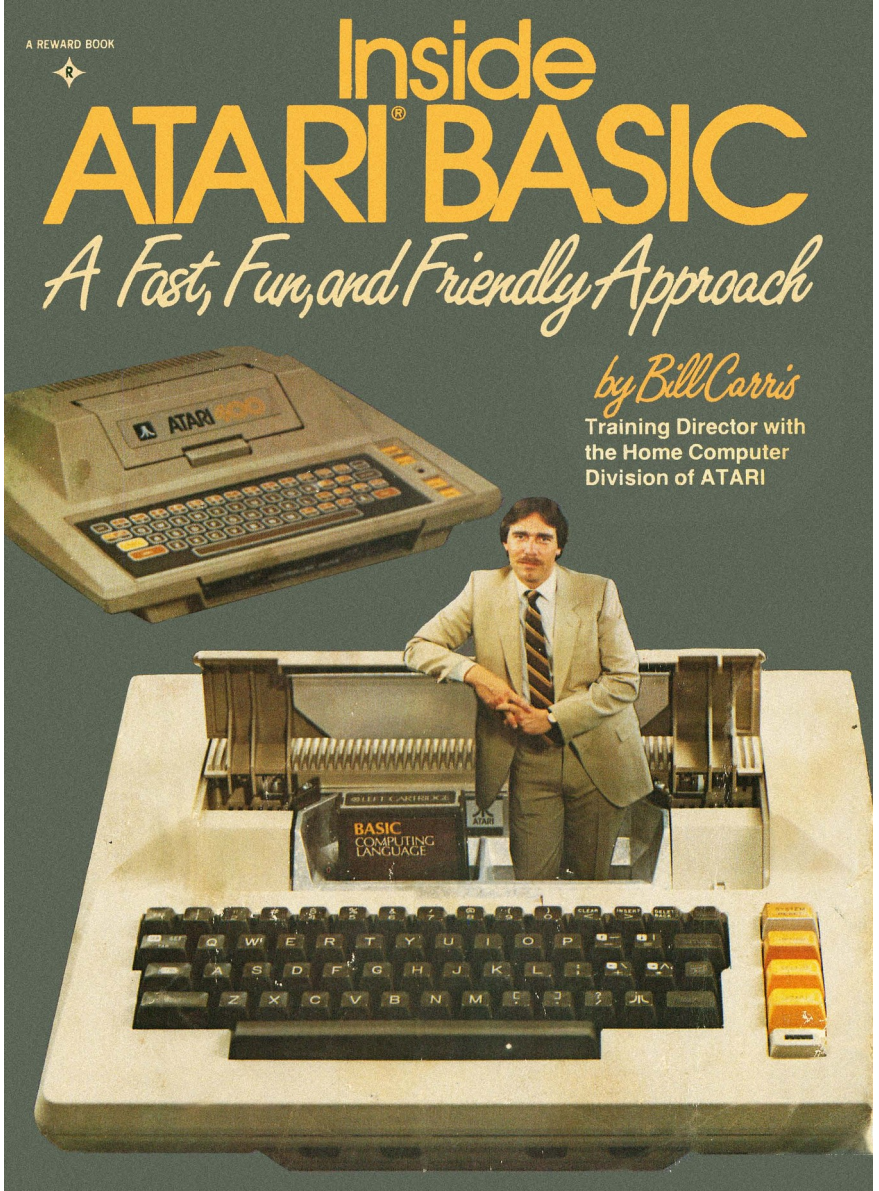
- Previously worked at Burlington Industries
- Hired in 1978 to preside over Atari
- "I want to put everyone's fears to rest. I've worked with designers for years in my career." and somebody thought "Oh my Lord, he's talking about towel designers."
- Called the developers “high-strung primadonnas”. T-Shirts were made for the developers that read “High-Strung Primadonna”.
- Had little respect for the developers as creative professionals

Atari 8-bit Computers

- Proposed by Ray Kassar to compete with Apple
- Designed by Joe Decuir and Jay Miner along with David Crane working on parts of the the OS
- Codename: “Candy” for the Atari 400, “Colleen” for the Atari 800, the machines were 6502 based computers with incredible graphics and sound capabilities (256 colors, four player graphics, four missile graphics)
- Included a SIO port, which was a precursor to USB in many respects (up to 8 devices could be daisy-chained or plugged into a “hub”, providing there was enough power to do so).
- Was the basis for the Atari 5200 “SuperSystem”.
  - Both machines were largely incompatible with each other to prevent cannibalizing each other’s marketshare.

Shepardson Microsystems

- Shepardson Microsystems was contracted to work on the version of DOS. Later contracted develop BASIC for the machine when the Microsoft BASIC couldn’t be ported over in time
- Team effort with Bill Wilkinson, Kathleen O’Brien, and Paul Laughton
- Also completed the Atari Assembler Editor Cartridge
- Shepardson Microsystems later determined these weren’t profitable and sold them to Bill Wilkinson and Mike Peters who formed Optimized Systems Software (which later sold advanced versions of BASIC, DOS, and Assemblers).
- (Source code is available along with comments in the amazing books “Inside Atari DOS” and “The Atari BASIC Sourcebook”)



By Evan-Amos - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=17758254


LEFT CARTRIDGE
LEFT CARTRIDGE
ATARI
RIGHT CARTRIDGE
BASIC
COMPUTING
DOM
RETURN
SHIFT
SYSTEM RESET
OPTION
SELECT
START

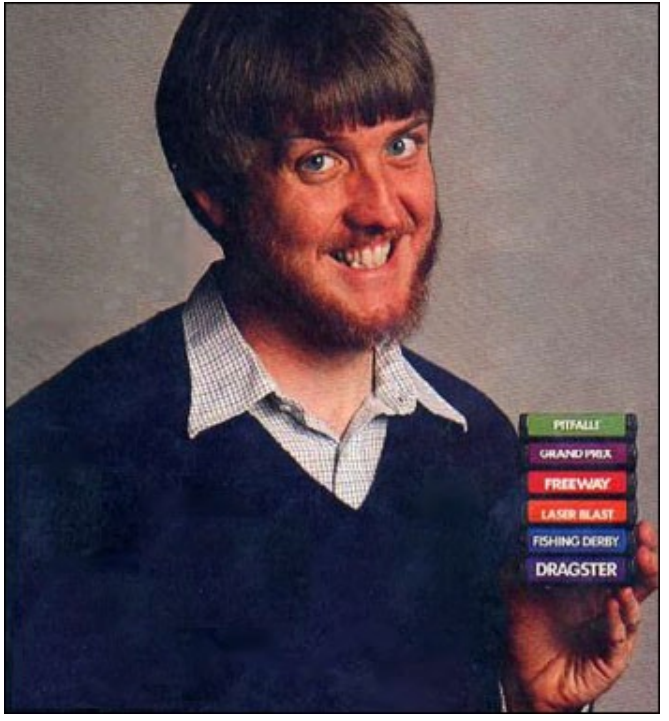
10 cents a cartridge and credit

- David Crane, Larry Kaplan, Alan Miller, and Bob Whitehead figured out that together they accounted for Atari's top selling VCS games and sent a note to Ray Kassar asking for 10 cents a cartridge plus credit.
- Ray told them they were no more important than the person assembling the cartridges and were a dime a dozen
- One of the senior Vps that escorted them out of Kassar's office said "It's pretty clear you guys are going to be leaving. Good Luck. I wish you well. There's nothing we can do".
- Along with Jim Levy they created Activision, a third-party developer for the Atari VCS.
- Others followed (Rob Fulop co-founded Imagic)

(I could make a list of the great games that came out of Activision, Imagic, and other third party developers that graduated from Atari but you wouldn’t be able to read the slide)

Rock Star Developers

- Few people knew who Atari developers were prior to Activision / Imagic (Warren Robinette notwithstanding for his “Adventure” Easter Egg
- Activision and Imagic changed that and turned these developers into rock stars. Their names were on the cover. People interviewed them. They were like programming royalty.



David Crane, Me, Garry Kitchen

1978–1981

A shit-ton of money

- Atari made $2 billion dollars in 1980 from the VCS and cartridge sales.
- In 1981 Atari’s gross was $3.2 billion (several thousand dollars more than the entire movie industry in Hollywood).
- At one point Atari had 27 buildings and the 101 road was nicknamed “Via Atari”.
- Jets would fly to get jumbo shrimp for the executive dining room.
- Did I mention drugs? Allegedly the folks handling Atari Imports (responsible for exporting Atari goods) were the only exporters that imported more than the exported (wink wink)

Alan Kay and Atari Research

- Alan Kay replaced Al Alcorn in 1981
- (Alan Kay was on the Xerox Alto project at PARC, and was one of the foremost computer researchers of the era. Trust me, this is a big deal).
- Offered $100 Million Research budget
- Did a lot of fundamental research in interactivity and human interaction with computers and artificial constructs (especially with Dr. Arthur Fiscial). Credited with a lot of fundamental research in networking and virtual reality
- Literally didn’t do any of the “D” of R&D. When Ray asked for what they’d been working on Alan said “you told us to give you rope but you never gave us a rope factory”.
- Was responsible for hiring Chris Crawford and a whole slew of other amazing researchers. It wasn’t a lack of talent that doomed Atari Research.
- Alan Kay was later poached by Apple to help them with research.

Atari Program Exchange

- Started in 1981 by Dale Yocum for distributing user-written software via Atari as a third-party publisher
- Was a curated program with prizes for the best programs (The coveted Atari Star award).
- Some of the best-selling products were:
  - De Re Atari, a manual for how to program the Atari Computers
  - Eastern Front (Written by Chris Crawford in his free time)
  - Caverns of Mars (Which was later released by Atari)
  - Dandy (which was later turned into Gauntlet)
  - Dunions Debugging Tool (the best debugger out there, later incorporated into MAC/65)
  - My First Alphabet (Fernando Herrera, who later started First Star Software).
- Presaged the shareware and public domain software movements
- Helped Atari break the “we write all of the software for our machines” mentality (many parts of the Atari were held as proprietary).

Prototypes, but no products

- Cosmos (Holographic hand-held machine)
  - Designed by Allan Alcorn, Harry Jenkins and Roger Hector
  - Canceled in 1981
- Atari 2700 (Atari VCS with a slick case and remote RF joysticks)
  - Case design was later repurposed for the Atari 2800 and Sears Telegames II
- Atari Mind Link (1984)
  - Control games with your mind! (or your very overactive eyebrows)
  - Canceled when tests caused people to have headaches
-

1982

Costly mistakes

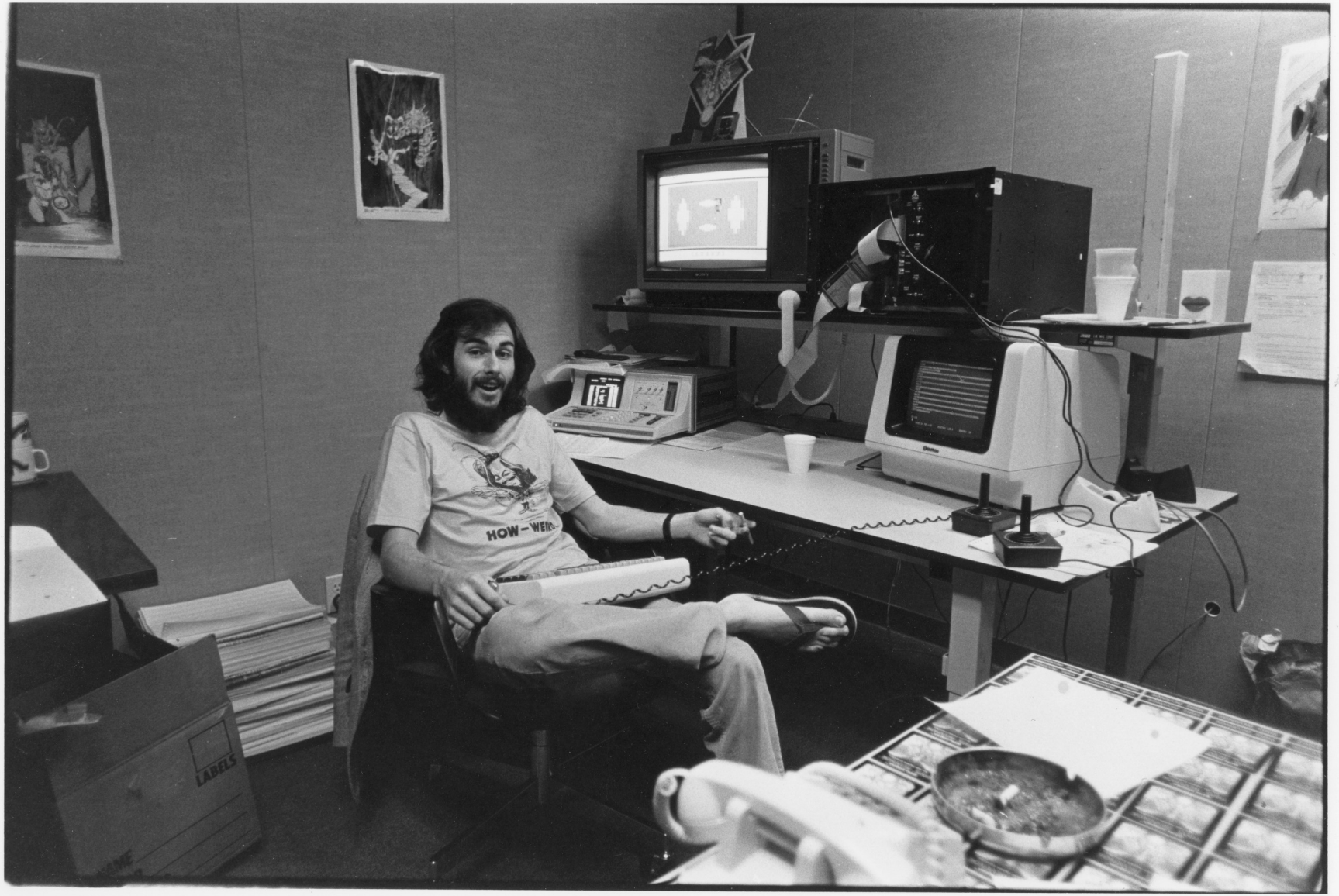
- Atari 5200 released
  - Sells 1 million units, compared with 30 million for the VCS. Folks recognized it as an incompatible Atari 400 computer with no keyboard and terrible joysticks.
- Colecovision created the Expansion #1, which allowed VCS games to be played on the Colecovision.
  - Atari sued and won and collected royalties from Coleco, but failed to see the demand for a similar unit for the 5200 until much later, when they hacked the CX-55 SystemChanger onto their 5200 machines.
- Atari thought consumers would only buy from them. They did not. Competition was heating up.

Pac Man

- Atari negotiated the home rights to Namco Games (Midway and Atari had the arcade rights to Namco's catalog).
- Tod Frye was responsible for programming Pac Man. Conceived of the most minimal version of Pac Man possible given the constraints. He completed it in 6 months, under immense pressure from management.
- Conventional wisdom was that Pac Man required at least a 4K ROM. Todd was given 2K ROM to work with. Atari management was being greedy.
- Pac Man in the arcade had 16K of ROM, 2K to run the program, and 2K of RAM for game state. The VCS only had 128 bytes of RAM. Worse, the game supported two players so the effective playfield was cut in half.
- Atari ordered 12 million cartridges, which was more than the number of VCS systems produced, thinking that it would sell consoles. It sold a respectable 7 million and is one of the most common Atari cartridges out there. "Do the math".
- The game was no better than the rip-off versions of Pac Man, including KC Munchkin on the Magnavox Odyssey 2, for which Atari sued Magnavox.
- Released in March, 1982
- (There is a Pac Man homebrew for the VCS which uses 4K and shows what was possible)

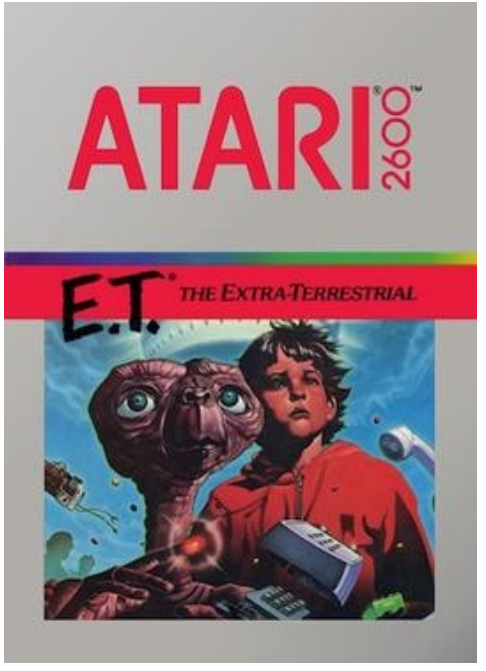
E.T. the Extra Terrestrial

- Warner Management thought great games were the result of great licenses, and no license was hotter than E.T.
- Warner paid $20-25 million for the home and arcade rights, and then told Atari to make the games happen.
- Howard Scott Warshaw was tasked with writing E.T. for the VCS, requested by Steven Speilberg himself (Howard wrote Yar’s Revenge and Raiders of the Lost Ark)
- The “normal” time to develop an Atari VCS game was 6 months. The Christmas Season and the negotiations gave Howard around 6 weeks (and he found out about it at dinner time)
- When asked by Steve Ross what he thought about making an E.T.-based video game, Atari CEO Ray Kassar replied, "I think it's a dumb idea. We've never really made an action game out of a movie.”


LABELS

E.T. the Extra Terrestrial

- Eventually sold 1.5 million units. 2.5-3 million units were left unsold.
- Stores started sending back their inventory, which caused Atari to have to figure out what to do with all of these unsold cartridges.
- Even if the game hadn’t been rushed and been received poorly it would still have cost Atari loads of cash, and was one of many poor business decisions.
- 5 weeks with no testing was asinine on the part of Atari and the negotiations. HSW should be commended for seeing the project through those impossible odds.
- (Yes, I got to meet HSW at Electronicon and see the first screening of “Once Upon Atari”, so I might be biased here.)



1983

(The year it all hits the fan)

Atari starts to lose money

- Sales of the VCS started to wane as console and computer competition from Commodore, Mattel, Sinclair, and Coleco materialized.
- Third party publishers like Activision, Imagic, Apollo, Mattel, Coleco, Parker Brothers and others began releasing third-party software for the VCS.
- Consumers became more cautious about buying games after rushed games like E.T. and cut-back versions of Pac Man. The glut of shovelware 3rd party titles didn't help much.
- Stores were flooded with titles, some of which sold, many of which did not sell and were returned or severely marked down.
- The E.T. deal proved financially ruinous, as did the over-production of Pac Man.
- Atari games were having a hard time finding a niche with more sophisticated game players
- The IBM PC began to erode the 8-bit computer market and dominate the business market.
- Computers like the Apple Lisa and the as-yet-unreleased Macintosh were starting to shake up the industry with a paradigm shift, and Atari didn't have anything that could compete.

Changes in leadership

- Ray Kassar was forced to resign due to allegations of insider trading in 1982
- “In December 1982, Kassar had sold 5,000 shares of stock in Warner Communications only 23 minutes before a much lower than expected fourth quarter earnings report would cause Warner stock to drop nearly 40% in value in the following days.”
- Ray was replaced with James J. Morgan, who came from Phillip Morris USA

Bleeding money

- Atari lost $536 million in 1983
- Eventually gutted staff of thousands to just 200 people
- Folks would have a call with someone at the beginning of the day, only to find their phone disconnected in the afternoon
- Stories of folks given 15 minutes to pack up their stuff and leave
- Stories of folks dropping equipment from second story windows to their cars below
- Stories of motivating programmers with cocaine to get them to produce faster
- (source: Valley of Genius)

Price War

- In May 1981, the Atari 800's price was $1,050, but by mid-1983 it was $165 and the 400 was under $150.
- Atari releases the 1200XL in March 1983 as a single-board computer in a sleek case for $899. Atari 800 computers were selling for $700, so the 1200XL didn’t sell well and was discontinued in June 1983.
- Later releases the 16K Atari 600XL and 64K 800XL. The 800XL was the best selling version of the XL series of computers, but was a victim of the price wars with Commodore.
- Other planned machines were the 1400XL, 1450XLD, 1600XL, 1650XLD, and the 1850XLD.
  - The 1400XL and 1450XLD made it to prototype stage and have been seen in the wild.
  - The 1850XLD was to use the Amiga Lorraine chipset, which eventually became the Commodore Amiga

Broken Atari

- James J. Morgan cancels the XL computers in an effort to get Atari back to its gaming roots.
- Atari software sales started to trickle with the uncertainty of the XL line and Atari’s uncertain future and old hardware (Keep in mind the VCS and 8-bit computers were designed in the 1970s)
- Some blame software piracy and innovations like the Happy Drive and ROM dumps for Atari’s lack of software, but the market for Atari computers and consoles was dwindling rapidly.
- James J. Morgan was tasked with finding a buyer for Atari

1984

“Imperial Troops have entered the base”
(announced over the intercom when Tramiel entered the building)

Jack Tramiel

- Founder of Commodore International, which began as a typewriter repair and calculator company.
- Jack was a holocaust survivor.
- Shrewd as hell businessman. Negotiated Microsoft BASIC from Microsoft in perpetuity, so Commodore never had to pay for new licenses for new machines
- Purchased MOS technology, the producers of the 6502 chip, and brought the engineers onboard. They created the Commodore PET, Commodore VIC-20, and Commodore 64 machines.
- Had a feud with Irving Gould, Commodore's major shareholder, and left Commodore Janary, 1984

Crashing Seller, Willing Buyer

- Warner sold the consumer division of Atari to Jack Tramiel, who reorganized it as Atari Corporation
- Jack’s take-over of Atari slowed the release of consoles and products that would have made a larger impact during this time (Notably the Atari XL line of in-development machines and the Atari 7800)
- Jack cared little for Atari’s legacy. Chris Crawford (after leaving Atari) relayed the story of being contacted by someone buying a filing cabinet from Atari that still had proprietary and confidential documents in it. Jack just cared about getting rid of the old office equipment.

Atari Amiga?

- Larry Kaplan, Jay Miner and Dave Morse formed Hi-Toro in 1982 to work on a new computer called “Lorraine”. Later was renamed Amiga because Hi-Toro (which was intended to mean “Hi-Tech Texan” was too close to Toro.
- Jay Miner was brought in to design the hardware and chips for the Amiga. (Sound familiar?)
- Amiga ran out of funding for Lorraine and was looking for investment. Atari in return would get one year of exclusive use.
- If Amiga didn’t pay back the loan or provide Atari with working hardware Atari would own the technology outright. They figured it was a win-win situation, since they figured Amiga wouldn’t be able to pay back the loan.
- Lorraine was the basis of the Atari 1850XLD system.
- Before Jack bought Atari he saw the Amiga. He liked the chipset but didn’t want the staff.
- Amiga was to give Atari the computer by June 30th, 1984 or forfeit the company. Instead they found a buyer in Commodore, and Amiga delivered a check for $500,000, which paid off the investment. Needless to say Jack was pissed.
- Atari sued Commodore and Amiga for breach of contract, which delayed the Amiga’s release. Meanwhile Jack’s company, Tramiel Technologies was already working on their own computer.

Atari ST, aka “The Jackintosh”

- Jack tasked Shiraz Shivji to start work on a 16 bit computer prior to purchasing Atari
- The Atari 260 ST and 520ST were 68000-based computers with 256 and 512 K of memory respectively (The 260ST saw limited Europe release).
- Design was completed in 5 months
- Used Digital Research’s GEM OS, and TOS (“The OS” or “Tramiel OS”)
- Came standard with MIDI ports, which made it an instant hit with musicians.

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Reputation

- Jack Tramiel had a reputation in the industry for being like “Attilla the Hun” to work with from a retailer perspective.
- Jack Tramiel’s “Business is War” attitude wasn’t hyperbole. He wanted to destroy Commodore and engage them in another price war.
- Atari’s shaky reputation with retailers also didn’t help the situation any.
- The Atari ST didn’t have support from many of the large publishers for the IBM or Amiga.
- The Atari ST was more popular in Europe than in the USA, (which was also true of the Commodore Amiga)

Atari 8-bit machines

- Atari releases the “final form” of the Atari 8-bit computers in 1985 with the release of the Atari 65XE and Atari 130XE with 64K and 128K each
- Atari releases the 2600 (aka 2600Jr), which was a low-cost Atari VCS, in 1986. Atari also kept releasing titles for the console.

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The XEGS

(aka what the 5200 should have been)

- 65XE with a removable (optional) keyboard and a built-in game (Missile Command).
- Two packages: standard had one joystick, deluxe had the keyboard and light gun
- Released in 1987 to compete with the Nintendo Entertainment System
- Major accomplishment was licensing many popular disk-based games from other third-parties and releasing them on cartridge

Atari 7800

- Designed by General Computer Corporation in 1983-1984.
- Was intended to be launched in 1984, but the sale / merger caused delays, in part because GCC wasn't paid for their designs.
- Tramiel thought that the 7800 was part of the deal and Warner should have been responsible for paying. Ultimately paid GCC to get the consoles that were already produced into release.
- Was eventually released in 1986, which turned what could have been a successful launch into a dull thud in light of the Nintendo Entertainment System.
- Used the SALLY chip, which was slightly more powerful than the Atari 8-bit line, but maintained backward compatibility with the 2600 games.
- Would have been a game-changer in 1982, a decent console in 1984, but was relegated to relative obscurity in 1986.

Atari Lynx

- Developed by Epyx from 1986-1989.
- Dave Morse, former manager of Amiga, moved to Epyx. Was asked by his son to create a portable game system.
- R. J. Mical and Dave Needle (former Amiga) were brought on to develop the hardware.
- Was the first color handheld portable device.
- Epyx faced financial difficulties and looked for a partner. Atari agreed. When Epyx went bankrupt Atari took over production.
- Released September 1, 1989
- In a cruel twist of irony, Lynx development required Amiga computers, which probably angered Jack to have to write the check for their purchase.
- Ultimately lagged the inferior Game Boy because of higher cost, poor battery life, and smaller library of games.

Atari Jaguar

- Developed by Flare Technologies
- Considered the first “64 Bit” console (through creative bit-accounting)
- Console based with an optional CD ROM attachment
- Soft-launch in 1993 for $249.99 in limited markets, later released everywhere
- In 1995 Sony would release the Playstation and Sega would release the Saturn. Both consoles shipped with a CD ROM drive, making the additional cost of a CD ROM on the Jaguar seem less appealing.
- The Jaguar was unique (difficult) to program, making ports to the system.
- Notable games: Tempest 2000 and Rayman, which were later ported to the Saturn and Playstation, and several other games like Battlesphere that if I don’t mention them the Jaguar folks will get mad.
- Hasbro released the Jaguar into the Public Domain in 1999. Has more life after the console was discontinued than when it was released.

Eventual decline

- Jack Tramiel didn’t care about the legacy of Atari, only that he had an established computer company to destroy Commodore. His laser-like focus on this task meant IBM and Apple were not correctly perceived as more of a threat until it was too late.
- The Atari ST continued to evolve into the TT and Falcon lines, both of which were more popular in Europe than in the USA.
- After the failure of Jaguar there were no other products in the pipeline, and the Tramiels wanted to cash-out of Atari and the computer business.

1996

Atari Corporation, RIP

- Reverse-merged with JTS Inc, who manufactured hard drives, and became JTS Corporation.
- For a while Bladerunner fans were worried that the Atari Logo would disappear and that their movie would have an anachronism like the Pan Am Logo. Hasbro eventually bought the brand and all intellectual rights from JTS Corporation

Epilogue

So what?

- Atari truly was the blueprint for many engineering-lead Silicon Valley companies.
- Without Atari we wouldn’t have Apple. Woz would have likely stayed with Hewlett Packard and Jobs wouldn’t have had Nolan as a mentor.
- Warner’s contempt for developers and unwillingness to open their platforms served as an example of what not to do for a computer company. Warner was a media company and thought that the VCS would be like a musician cranking out hits for 20 years. The market and defection of developers to third parties quickly eroded that notion.
- The impact of De Re Atari, APX, and Chris Crawford’s evangelism of the 8-bit computer platform are an understated reason for part of the later success of the 8-bit computers. Evangelist roles have continued to evolve along with developer relationships.
- Atari became synonymous with video games and video game culture in the 1980s. It’s hard to overstate their impact on the overall culture, and their (sometimes undeserved) conflation with quality games and hardware.

Game Over

(thank you!)

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