

# Intellivision: Its Legacy, *and the evolution of baseball video games*



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**Case History**  
STS 145

(Note: as I have included many photos within the text, it would make much better reading if you printed the paper out first.)  
(Note: this paper comes out to about 3,463 words.)

*The year is 1979. Jimmy Carter is in the White House. The United States is in the middle of a severe oil shortage. And Atari has swept across America. The Atari VCS, also known as the Atari 2600, essentially created and dominated the home video game market. There were fringe companies that had sold video game consoles before Atari, and they were still in fact competing in the space(Magnavox's Odyssey 2 in particular), but Atari was basically the big winner (The Dot Eaters (b) 1). Atari will have sold over 12 million 2600 units by 1983, and over 25 million units total (Perry and Wallich 45, The Dot Eaters (a) 3).*



**Above:** The vaunted Atari VCS, or Atari 2600 system.

But unbeknownst to most people, a credible gorilla backed by a large company is about to enter the field. Mattel, famed for its Barbie dolls, had been selling electronic handhelds, and after the success of Atari, decided to become a competitor with the Intellivision game console. Released in 1980, Intellivision would be Atari's main rival for the next few years (Intellivision Lives (a) 1). Technically, using more memory, more powerful graphics, and a built-in operating system, Intellivision would set a standard that pushed for better looking games. It would also for the first time create real competition for Atari and legitimized the video game industry with Mattel's well known brand. By being a catalyst for the industry, Intellivision served a useful role in the history of video gaming. One example of the impact Intellivision has had in video game history is the series of baseball games that Intellivision created from 1979 until 1983. Clearly superior to Atari's Homerun,

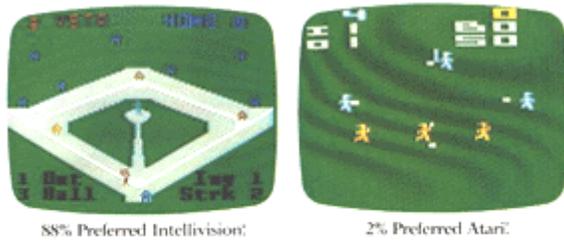
Intellivision's innovative marketing techniques and use of Intellivision's more abundant memory enabled Major League Baseball to become the company's best-selling game. After Major League Baseball came World Championship Baseball and World Series Major League Baseball in 1983 (Intellivision Lives (c) 10). World Series MLB, in particular, would have an influence on subsequent baseball video games.

While Intellivision primarily lasted for only five short years, its parent company, Mattel, had actually been thinking of entering the home video game market for years before. In fact, "right after Atari came out with the 2600, the people at Mattel . . . said, 'Mattel needs one of these'" (Cassidy 1), according to Keith Robinson, a former programmer and manager at Mattel. But because Mattel at the time had no electronics people, it hired APh Technological Consulting in Pasadena, California to start the planning (Cassidy 1). After APh produced a series of handheld games that sold well, Mattel decided to go ahead with a full-on home video game console (Cassidy 2). David Rolfe at APh designed the operating system software and some of the first games, while hardware was developed internally at Mattel, led by Dave Chandler (Intellivision Lives (e) 1, 5). The system was test-marketed in Fresno, California in 1979, before being released in 1980. Overall, over three million units were sold, mostly in the early years (Intellivision Lives (e) 2). Comparatively, 12 million Atari 2600 units were sold from 1977 to 1983 (Perry and Wallich 45). Mattel hired its own programmers, dubbed the "Blue Sky Rangers," and over 120 games were developed for the system by Mattel and other companies (Intellivision Lives (a) 3). Intellivision was on its way.

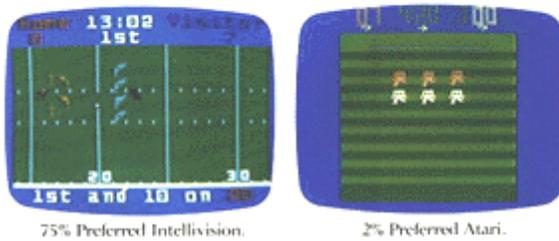
It was a high time for Mattel, which began to bask in the glow of Intellivision's profits. For programmers like Robinson, "it was the best time for a lot of the people,

there was just such a passion to what we were doing, everybody was just... caught up in it, the passion of everyday working at Mattel and working with the people we had there” (Intellivision Lives CD). But it wouldn’t last long. The video game crash occurred in 1983, which very quickly caused massive losses at all video game companies. Atari survived, but “in 1984, no one could make a profit” (Robinson pers. int. 3/12/02). Intellivision went out of business that year, and Mattel almost went down with the company. The company was eventually acquired by newly formed INTV Corp., which limped on before finally going bankrupt in 1990 (The Dot Eaters (c) 5). Like a shooting star, Intellivision was brilliant for a few moments, before disappearing below the horizon.

While Intellivision existed as a prime competitor for Atari for only awhile, Mattel’s entrance into the market did much to jump start the video game business. Quite simply, before Intellivision, Atari dominated the video game market, running roughshod over any other competitors, like Magnavox’s Odyssey 2 system. According to a 1983 paper written in the IEEE Spectrum, the highly respected magazine of the Institute of Electrical and Electronic Engineers, the Odyssey 2 “was a more primitive game machine . . . has only eight colors, compared with Intellivision’s 16 and the VCS’s 128.” In 1980, Mattel, by entering the video game market, gave Atari its first credible opponent. While Atari was itself backed by another large company, Warner Communications (a subsidiary of Warner Brothers), Mattel was a company that specialized in the toy and entertainment business, and had previous experience with electronic games. The name brand of Mattel, the “big, conservative” creator of Barbie, legitimized the video game market and help grow its market size, benefiting both Intellivision and Atari (Robinson pers. int. 3/12/02). For people who were hesitant to buy into video games as more than just a fad, “it was a



**APPARENTLY,  
GEORGE PLIMPTON  
ISN'T THE ONLY  
ONE WHO CAN SEE  
THE DIFFERENCE.**



**Left:** One of Mattel’s George Plimpton attack ads against Atari.  
**Above:** George Plimpton himself does the selling.

real stamp of approval . . . the question went from ‘Should I get a video game system’ to ‘Which one should I get?’

(Robinson pers. int. 3/12/02)? The Tekis E. Perry and Paul Wallich, who wrote the 1983 IEEE paper, stated quite bluntly, “The Intellivision is the VCS’s major competitor” (50), indicating the two-power paradigm of the video game market at the time. Intellivision’s presence in the market, and Colecovision’s subsequent entry, drove Atari to improve its technology, quickly. In one Intellivision ad, George Plimpton, a prominent sportswriter and author, showed Intellivision’s Major League Baseball game side-by-side with Atari’s Homerun to demonstrate how terrible some of Atari’s games were (The Dot Eaters (c) 2). Indeed, by 1982, Atari had come up with a new video game system, the Atari 5200, which “was meant to be the Intellivision killer . . . Intellivision always boasted about its 16-position controller versus Atari’s 8-position so Atari fired back with a full 360 degree speed sensitive joystick” (The Atari 5200 SUPERSYSTEM 2). Intellivision’s entry into



**Above:** The Atari 5200.

video games signaled the birth of this now very competitive market, which before consisted of a less-motivated Atari and a bunch of also-rans.

One of the primary reasons why Intellivision

was successful was because of its technical strength.

The master component consists of two hand-held

controllers, each with a ten-digit key pad with enter and clear buttons, plus a 16-direction disc for turning (MLB Cartridge Instructions 1-2). There are four side buttons, two on each side of the controller (MLB Cartridge Instructions 3). To play a game, one would slip that particular game's overlay over the key pad (MLB Cartridge Instructions 2). So the controllers were fairly complex, but once the overlays slipped over the keypad, things became much simpler.

More extraordinary was the what lay underneath the console cover. Perry and Wallich called the VCS a first-generation unit and Intellivision a second-generation unit (51). It had far more random-access memory (for example, 128 bytes of RAM was devoted for the display in the VCS, compared to 3 kilobytes for the Intellivision), and three channels of sound instead of one (Intellivision Lives (e) 4, Perry and Wallich 50). Intellivision had less colors than the VCS, but its games could run eight moveable objects at once instead just two with the VCS (Perry and Wallich 49-51). The core of the unit was a 16-bit microprocessor (something no other video game had until the Super Nintendo), supported by an operating system called the "Exec" (Intellivision Lives (e) 2, 5).



**OBJECT OF THE GAME**, of course, is to score the most runs in 9 innings, or extra innings to a decision.

**CHECK YOUR EQUIPMENT:**

**MAKE SURE:**

- MASTER COMPONENT is connected to the TV set and power cord is plugged in.
- TV set is plugged in and properly adjusted.
- BASEBALL Cartridge is placed in the slot and firmly engaged.
- OFF/ON Switch is turned on.

**NOTE:** When Keyboard Component is added to the Master Component, Cartridge goes into slot on the Keyboard Component, sold separately. See instructions with Keyboard Component.

**PRESS RESET BUTTON:** Title will appear on TV screen, "BASEBALL."

**SELECT SPEED**  
Press button 1, 2, or 3 to select a SLOWER game speed. Press Direction Disc for MAJOR LEAGUE SPEED, fastest of all!

A faster game speed means that **everything** goes faster . . . pitches will come over at faster speeds, runners will move faster on the bases, etc. At PROFESSIONAL BASEBALL SPEED all reactions will have to be very fast!  
Until you get familiar with the game, you'll probably want to begin at one of the slower speeds.

**Above Left:** The Intellivision console with one of the controllers out.  
**Above Right:** A demonstration of how overlays fit into a controller.  
**Below:** Instructions on how to use the Intellivision console in the Major League Baseball manual.

Having an operating system was fairly unusual in 1979, as everything was usually built with hardware (Cassidy 2). Atari's approach had been to build simple

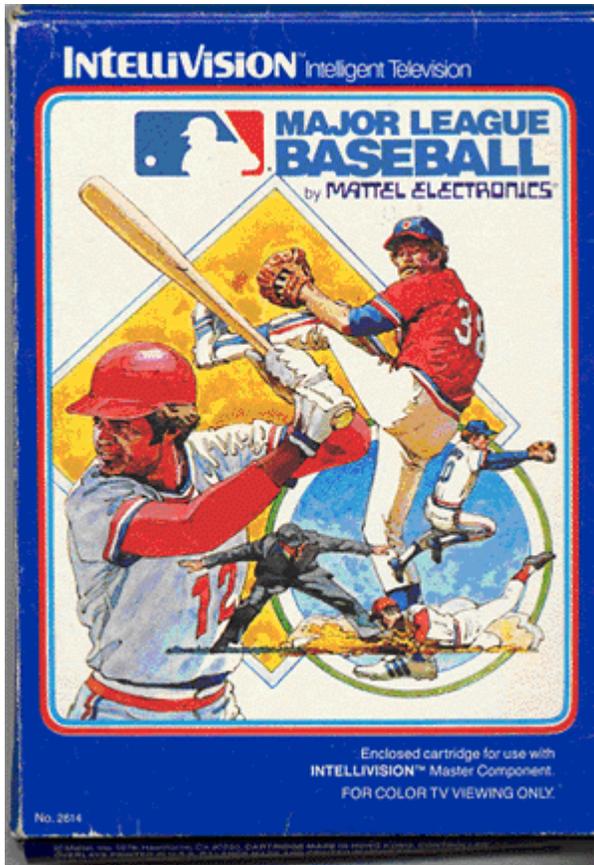
hardware so that it could be adopted to many simple games, but that limited the sophistication that games could have (Perry and Wallich 45-49). But Intellivision wanted to build complex games. As David Rolfe, the APh consultant who wrote the Exec, explained, “the Atari 2600 . . . had a nice, general processor . . . the Intellivision was the first home system that created a great hardware environment for the new generation of software people” (pers. inter. 2/26/02). What the Exec did was create a layer of abstraction over the hardware so that software, in the form of games, could be built on top of it (Rolfe pers. inter. 2/26/02). Basically, whereas earlier, if one wanted to change something in a game, one would have to go into the hardware and physically mess around with the wiring, now one could just change the assembly software code for the game, which looked something like:

```
BNZ STPGUY ;          STOP MOTION IF WHEEL NOT PUSHED
XOR  #03F0,R3 ;      MOVING, SO HE SEQUENCES AT MAX RATE
MOV  R3,MAN+.OBJSEQ ; ..
MOV  #12,R0 ;        SPEED AT WHICH HE RUNS
CALL GETVEL ;        FIGURE VELOCITY
(A Trivial Intellivision Game 2).
```

According to Robinson, both the Atari and Odyssey consoles were hard-wired and didn't use software. By using the Exec, cartridge space essentially doubled, and “you could get the program running much faster . . . allowed us to make games much faster” (Robinson pers. int. 3/12/02). In fact, because operating systems were such a novelty in video game systems at the time, Rolfe created Intellivision's first and most popular game, Major League Baseball, at the same time that he developed the Exec so that he could test the Exec and make changes to it while it was still in development. Intellivision helped start a trend of “greater and greater abstraction . . . [now], younger programmers know less

about hardware and more about software constructs than I do” (Rolfe pers. inter.

2/26/02). While the typical Intellivision viewer probably didn’t notice what was under



the covers, what was there was quite special indeed.

In terms of software, one area where Intellivision games had an impact was in the realm of sports games. Why sports games? Sports are an integral part of American cultural life. What pong and some of the early Atari and Odyssey games did was give Americans a glimpse of what a modern sports video game is. Today’s sports video games are chock full of claims of looking very

real, but back then, the limitations of hardware was a huge constraint, but that didn’t

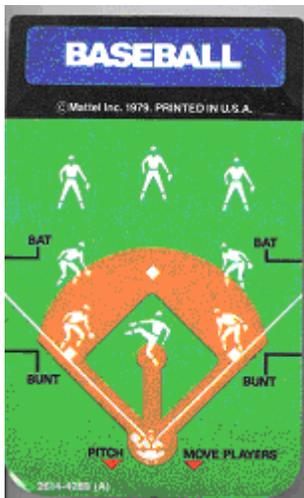
**Above:** The cover of the Intellivision game, Major League Baseball. Notice the official MLB logo on the top.

prevent Intellivision from trying to emulate real sports games. After all,

just as video games have become a large part of American culture, sports, in its own way, is as well. Fred Englis, in his book, The Name of the Game, stated that “the culture of a people is its way of life . . . culture provides small escape from the sense of unique personal futility which fractures future connexions,” and concluded that stories about our sports heroes are like old tales that have been passed on from generation to generation,

that “our mythologies and our heroes give us the chance of recognizing our own best lives” (34-35). In essence, a sports video game allows a person to become the hero, which is something not easily attainable in real life, in modern industrial society. By playing Ken Griffey Jr. in EA Triple Play, do we not become, for a moment, the mythical hero? That’s where the appeal is. Steven Poole, in Trigger Happy, asserted similarly that “video games are supposedly played in darkened rooms by people who never get any real physical exercise . . . but in their hovels they can be tennis demons, baseball stars or gifted golfers, or control a whole football or basketball team to world victory” (37). Modern sports games recreate the experience of viewing a game on television rather than the game itself, because it’s really about the glory of being watched by adoring fans and leading your team to victory, not how fun hitting a ball with a bat is.

In stepped Intellivision, whose class of sports games like Major League Baseball took the reality of sports video games to a new level. Of course, before Intellivision, there was Pong and a few other very simple ballgames that Atari had come up with. What Mattel did first, was to connect the Intellivision games up with Americans’ love for professional sports by entering into licensing agreements with the various leagues. Hence came games like Major League Baseball (with MLB’s official logo on the game’s cover), along with NBA Basketball, NASL Soccer, PGA Golf, etc. Years before EA Sports branded their games, Intellivision was doing it. They rolled out George Plimpton, a prominent sports writer, to sell their sports games on television. Mattel pulled out all stops to make the American public believe that they were emulating the major leagues when they played Intellivision games.



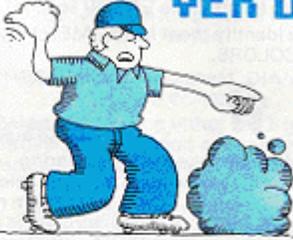
Above: The cover of the MLB game owner’s manual.  
 Above Right: Two screenshots of MLB.  
 Left: The overlay for MLB.  
 Next page: Pages from the MLB game owner manual.

The Major League Baseball game itself was also more real than any previous baseball game. David Mrozek, a writer on online classic games Web site [Tom’s Heroes](#), was disdainful of Atari’s entry, Homerun, “I can see why Atari didn’t name this one ‘Baseball’, since it bears little resemblance to the national pastime” (Mrozek 1). Intellivision’s game, which Mrozek called “groundbreaking,” featured a full nine

players on each team, a variety of different pitches for the pitcher, base-stealing ability, and home runs. And when there was a home run, one could hear the crowd go wild, cheering the

**HEAR THE ACTION.** You'll hear simulated cheers when you make a hit. Hit a grand slam home run, and they'll go wild. You'll hear the crack of the bat, hear the "ump" call the outs!

**YER OUT!**



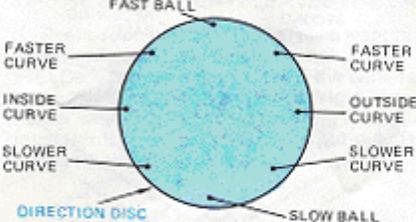
Most professional baseball rules apply - 3 strikes for an out, 4 balls for a walk, first two foul balls count as strikes. **NOTE:** All hits in this game are grounders, therefore, a **batter can not fly out**, not even on fouls. Home runs can be hit. Force-outs, double and triple plays can all be made.

**PLAY BALL!**  
(DEFENSE)

**YOU'RE PITCHING.** Pitcher automatically has the ball at the start of each inning. After a foul ball, the ball will automatically return to the pitcher.

6

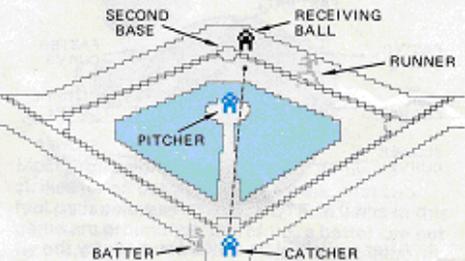
1. Press the outer edge of Direction Disc to pitch. Use the full circumference of the Disc (360°) For example, press ANYWHERE BETWEEN a Fast Curve inside (Left of Disc) and a Slow Curve. You'll find your control is precise.
2. WHERE the Disc is pushed determines KIND of pitch. It also determines how a curve is thrown. You can throw fast and slow, inside and outside curves, fast balls and change ups.



3. After a pitch, if no contact is made by the batter, catcher would have the ball. Return ball to the pitcher by pressing PITCHER on Hand Controller.
4. With a man on base, keep 'em honest! Have your pitcher throw to a base. REMEMBER--push down on FIELDER you want to RECEIVE the ball--1st base, 2nd base, etc. When throw is made, baseman will automatically cover his base. (Shortstop will not cover 2nd base automatically.) (NOTE: Pitcher's throw to 2nd base is a lot quicker!)

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5. Try for a PITCH OUT play! (When baserunner takes too big a lead, pitcher throws outside curve to catcher, ignores the batter. Catcher throws to 2nd or 3rd ahead of the baserunner!) Have your fingers ready! Push down on **right** side of Disc. Then, quick! Push down on 2nd or 3rd base POSITION. Get catcher's throw off **fast**, trap the baserunner! (Batter will take the outside pitch for a ball or maybe even swing at it!)



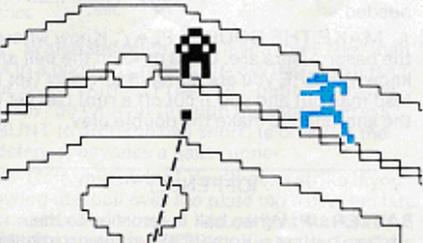
6. Catch him in a RUNDOWN! Fake out the baserunner! Remember: basemen do **not** have to stand on the bag. Maneuver your basemen **closer** to the runner with the Direction Disc. Trap him between the 2nd baseman & the shortstop, for example. Run him down & get the putout!
7. You can intentionally walk a batter, put a man on 1st base and try to set up the double play. Throw four curve balls wide of the plate.

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8. Pitcher can **not** hit a batter with a wild pitch. (No balks, no passed balls in this game).

**FIELDING.** Fielders **don't just stand there!** They must **MOVE** to get the ball and **then** throw to a base. No fly outs in this game! Foul balls cannot be caught in the air. Any player can go after a fair ball. The players can be moved into position to field the ball before it comes to a stop. **SO KEEP AN EYE ON THE DIRECTION OF THE BALL WHEN IT LEAVES THE BAT!**

1. Press down on the FIELDER you want to go after the ball. When he gets the ball, press FIELDER you want to RECEIVE the ball--1st base, 2nd base, etc. If a ball goes right to a fielder without him having to move, he **still** must throw to a base to make the put-out. **There are no fly outs!**



2. Get a jump on the ball! Start fielder moving, when you see where ball is headed. Press Direction Disc to move fielder towards the ball.

9

hero of the game, you, the video game player. This was a game that more closely emulated major league baseball than any previous game, from the MLB endorsement, to getting legitimized by a major sportswriter, to having game play that actually resembled real baseball (even a referee that yelled, “Yer out!”). Rolfe, the game’s main programmer, purposely tried to have the game emulate major league baseball as much as possible. He believes that “attention to detail was essential to MLB . . . the combination of powerful (for its day) hardware, good graphics, good programming made MLB . . . a success. And if you’ve seen Atari’s Homerun, you know you don’t have to ask me why it isn’t as good” (Rolfe pers. inter. 2/26/02). The public responded by buying over a million units of Major League Baseball, by far the most popular Intellivision game out there (Intellivision Lives (d) 8). And according to Robinson, this started a trend, that “licensing snowballed from there; Atari had licensed arcade games, [but] that became a really big thing. By 1983, you had to have some kind of license for all your games. Back then [in 1980], there was no licensing . . . Mattel tried to get licenses for everything” (pers. int. 3/12/02). It was games like Major League Baseball that started the trend of sports games becoming more and more realistic, and this would eventually lead to the modern games of today that capture every minute detail of the game.

Subsequent baseball games that Intellivision rolled out also continued to make the game more real. World Championship Baseball is essentially the same as Major League Baseball, but added some graphical effects for sliding, a sense of height (the earlier MLB game only existed in two dimensions; no height), bouncing balls, one-player modes, and fly-balls (Mrozek 3). But whereas World Championship Baseball was an evolutionary game, World Series Major League Baseball was a completely new game. A good

Top Right: A screenshot from World Championship Baseball. Middle and Bottom Right: Screenshots from the groundbreaking game World Series Major League Baseball.



comparison of World Series

MLB to the earlier Intellivision

MLB games was that “Major

League Baseball was like a

pinball machine with a baseball

look to it, and World Series

MLB was much more realistic”

(Robinson pers. int. 3/12/02).

Put out for the add-on

Intellivision Entertainment

Computer System, World Series

MLB used different television

camera angles, and was the first

game to incorporate player



statistics into the game (Intellivision Lives (c) 10). The game used real professional ball-

players’ statistics (though not their real names for legal reasons), reinforcing the sense of

sports heroism for the player. The game was programmed by Eddie Dombrower, but the

idea for using player statistics had actually come from Intellivision manager Don

Daglow, who had programmed the first-ever computer baseball game in 1971 (which

now sits in the Baseball Hall of Fame in Cooperstown) (Intellivision Lives (c) 10,

Stormfront 1, Robinson pers. int. 3/12/02). Sadly, despite the many features in World Series MLB that were way ahead of its time, the Intellivision Entertainment Computer System did not sell well, and combined with the fact that World Series MLB was released in the middle of the video game crash in 1983, few people ever saw the game.

Even though few people got to play World Series Major League Baseball, its design would affect later baseball games. Don Daglow and Eddie Dombrower, after working at Mattel, went on to create the classic baseball video game, Earl Weaver Baseball. Daglow later founded Stormfront Studios, and managed the creation of the popular baseball game, Tony La Russa baseball. What both games had in common with World Series MLB was very strong manager functions that featured real players and real statistics, a trend that “really started with World Series MLB” (Robinson pers. int. 3/12/02). Daglow, who was behind all three games, is still creating games today, most recently for the XBox console. No doubt, he still carries with him the early lessons of Mattel.

For all the impact that Intellivision had on the history of video gaming, technically, play-wise, and in marketing, it was still a failure. Why was that? World Series Major League Baseball was, by all accounts, a very cool game, but few people played it. The company was essentially done after 1983, despite the backing of Mattel. In fact, Mattel almost went bankrupt as well due to Intellivision’s failure; what then would we do without Barbie dolls? There were a variety reasons for the failure, most prominent of which was the video game crash that wiped out virtually everyone in the market. Atari survived, but it was badly wounded as well, and would eventually go out of business. The market had become inundated with too many consoles, too many

games. Intellivision itself produced relatively few games (just 71 by Mattel itself and another 50 by outside companies like Activision), but Atari had flooded the market with many cheaply made games, “too many of them . . . lacking in game play and in graphics” (Atari-History (d) 1). Another reason for the failure is that Intellivision never did manage to beat Atari. Atari sold way more consoles than Intellivision did, despite Intellivision’s technological advantage. Atari’s games may have been simple, but they were addictive, and Intellivision’s graphics were not so much better that they could blow Atari away. According to Perry and Wallich, some found Intellivision’s many-buttoned controllers difficult to use; also, the advantage of having eight moving objects instead of two in the VCS was somewhat negated by the fact that if an object had, say, two colors, Intellivision’s hardware had to treat the object as two separate objects (50). This limited the amount of color Intellivision could put in its video games. Intellivision had very powerful hardware, but somehow, despite being able to become Atari’s main competitor (which was an accomplishment in and of itself), it never even got close to winning.

Mattel’s Intellivision game system, because of its competitiveness technologically, its aggressive marketing and superior game play of its games like Major League Baseball, had a deep impact on the video game industry. Before, it was, “What industry?” It was, after all, just Atari and a few minor companies. But Mattel’s entry really jump-started the competitive nature of the industry and got things rolling. Culturally, Atari had far greater of an impact on the American psyche than Intellivision ever had. A whole generation of Americans grew up on Atari. Only a fraction of that generation still remember second-place Intellivision. In time, Americans would move on to faster, better systems, leaving everyone, including Atari, behind. Today, these old

games are relegated to the many classic gaming Web sites out there, including several on Intellivision. But there are two interesting bits of recent industry news to report. Mattel is back in the computer game business, with its series of Barbie doll games. And so is Intellivision. It was announced late last year that Intellivision Productions, Inc., which now holds rights to the game and is led by Robinson, and THQ Wireless will be porting old Intellivision games like Astrosmash onto Motorola i85 and i59sx phones (Intellivision Lives (f) 1). So the old characters are back, ready to carry on the Intellivision legacy.

*“An aged man is but a paltry thing,  
A tattered coat upon a stock, unless  
Soul clap its hands and sing, and louder sing  
For every tatter in its mortal dress . . . ”*  
-W.B. Yeats, “Sailing to Byzantium”  
(Inglis 46)



### Research Notes

I have a reasonably large number of sources, but few book sources because all the books I needed at Green Library were either already checked out or on hold by someone else already. I tried recalling the books, but the books were not returned to the library in time. Nevertheless, I am quite confident of the historical accuracy in my paper. For nitty-gritty technical information, I've relied on primary source interviews, the official Intellivision Web site, as well as an article published in the IEEE Spectrum, which is an industry magazine with a very high reputation. For other facts that I have used in the paper, while I may have cited a particular fact with one source, I usually did fact-checking and made sure there was another credible source saying the same thing before I used the fact. I also checked out who wrote these Web sites so that I could better understand whether some of these Web sites were credible or not.

### Annotated Bibliography

“The Atari 2600 Video Computer System.” (c) 2002. The Atari History Museum.  
11 Mar. 2002. <http://www.atari-history.com/videogames/atari2600.html>.

This page has a brief history of the Atari 2600 and its development details, as well as information on the video game crash of 1983.

“The Atari 5200 SUPERSYSTEM.” (a) 2002. The Atari History Museum.  
11 Mar. 2002. <http://www.atari-history.com/A5200.html>.

This page contains a brief history of the Atari 5200 system and its development and system details, as well as information on its Intellivision competition.

“Atari Video Game System.” (d) 2002. The Atari History Museum.  
11 Mar. 2002. <http://www.atari-history.com/A2600.html>.

This contains some more information on the Atari line of video game systems as well as on Intellivision as a competitor.

“Bits on the Fringe.” (b) 2002. The Dot Eaters- Classic Video Game History.  
11 Mar. 2002. <http://www.emuunlim.com/doteaters/play3sta2.htm>.

This page contains information on pre-Intellivision competitors to the Atari 2600.

Cassidy, William. “Classic Gaming Expo 2000: Intellivision Keynote Address.”  
2000. Classic Gaming. 11 Mar. 2002.

This is a magazine article covering the Classic Gaming Expo in 2000, which included speakers from the Blue Sky Rangers like Keith Robinson and from APH like David Rolfe. There were some details on the Exec here.

“Contenders to the Throne.” (c) 2002. The Dot Eaters- Classic Video Game History.  
11 Mar. 2002. <http://www.emuunlim.com/doteaters/play3sta3.htm>.

This page contains the history of the Intellivision game system as well as business details of how the system fit in with its competitors.

“Don Daglow.” 2002. Stormfront Studios. 11 Mar. 2002.  
<http://www.stormfrontstudios.com/dondpg.htm>.

This page contains a biography of Don Daglow, who managed the creation of World Series Major League Baseball at Mattel as well as later games Earl Weaver Baseball and Tony La Russa Baseball.

Inglis, Fred. The Name of the Game: Sport and Society. London: Heinemann, 1977.

This book contains a very broad philosophical and cultural look at why sports are important. It's quite interesting, really, and I've used part of the book's arguments in my paper on why sports video games became such a popular genre of games.

“Intellivision: A Brief History.” (b) 2002. Intellivision Lives. 11 Mar. 2002.  
<http://www.intellivisionlives.com/bluesky/history.shtml>.

This page contains a brief history of Intellivision, put out by Intellivision Productions.

“Intellivision: Ask Hal, FAQ to the Blue Sky Rangers.” (a) 2002. Intellivision Lives.  
11 March 2002  
<http://www.intellivisionlives.com/bluesky/people/askhal/askhal.html>

This FAQ put out by Intellivision Productions contains factual information about when games came out, how many came out, how many were sold, who made the games, details on the games and the system, etc.

“Intellivision Calling.” (f) 2001. Intellivision Lives. 11 Mar. 2002..  
<http://www.intellivisionlives.com/media/stories/wireless.shtml>.

This is a press release detailing Intellivision Productions and THQ's agreement with Motorola to port out Intellivision games onto Motorola cellular phones.

“Intellivision Development History and Technical Overview.” (e) 2002. Intellivision Lives. 11 March 2002.  
[http://www.intellivisionlives.com/bluesky/hardware/intelli\\_tech.html](http://www.intellivisionlives.com/bluesky/hardware/intelli_tech.html).

This contains the official history of how Intellivision was developed, and a detailed technical review of the master component which comes from an in-house document dated 31 Oct. 1980.

“Intellivision Entertainment Computer System.” (c) 2002. Intellivision Lives. 11 Mar. 2002. <http://www.intellivisionlives.com/bluesky/games/credits/ecs.shtml>.

This is a description put out by Intellivision Productions of all the games that were produced for the Intellivision Entertainment Computer System, including World Series Major League Baseball. World Series MLB was actually one of the few games that actually was released before that system before Intellivision went under.

“Intellivision Lives.” CD-ROM. Intellivision Productions. 1999.

This CD contains a slide presentation of Intellivision history, video interviews with several Blue Sky Rangers, as well as emulation software of several of the original games.

“Intellivision Sports Network.” (d) 2002. Intellivision Lives. 11 Mar. 2002. <http://www.intellivisionlives.com/bluesky/games/credits/sports.html>.

This is a listing of Intellivision sports games for the original system. It contained facts about each game, including Major League Baseball.

“Major League Baseball.” Game Cartridge with owner’s manual. Mattel Electronics. 1979.

This game cartridge contains the owner’s manual as well as illustrations I have used for pictures.

Mrozek, David. “History of Baseball Video Games.” 2002. The Video Game Critic. 11 March 2002. <http://www.videogamecritic.com/baseball.htm>.

David Mrozek writes for Tom’s Heroes, which is an online classic gaming magazine of sorts. The creator of Tom’s Heroes, Tom Tjaba, is a classic gaming industry writer. This particular page contains reviews of many major baseball video games.

Perry, Tekia E. and Wallich, Paul. “Design case history: the Atari Video Computer System.” IEEE Spectrum Mar. 1983: 45-51.

This was a paper in the IEEE Spectrum about the technical details of the Atari 2600. Towards the end, the paper compared the technology of the 2600 with Intellivision and the Odyssey 2.

“Pixel Boxes.” (b) 2002. The Dot Eaters- Classic Video Game History. 11 Mar. 2002. <http://www.emuunlim.com/doteaters/play3sta1.htm>.

This page contains information on the Atari 2600 as well as its predecessors, the Fairchild Channel F and the Magnavox Odyssey.

Poole, Steven. Trigger Happy. New York: Arcade Pub., 2000.

I used some information and quotes in the book on the birth of sports video games for the paper.

Robinson, Keith. Personal Interview. 12 Mar. 2002.

Keith Robinson is a former Mattel programmer, manager, and Blue Sky Ranger. He is familiar with what went on in the video game industry and at Mattel during the Intellivision days. He is currently President of Intellivision Productions, which mostly does emulation software for Intellivision games.

Rolfe, David. "A Trivial Intellivision Game." 2002. David Wolfe Web site. 11 March 2002. <http://home.earthlink.net/~davidrolfe/trivia.htm>.

This contains assembly code that is part of a test game program for the Intellivision system.

Rolfe, David. "CGE Distinguished Guest." 2002. Classic Gaming Expo Las Vegas. 11 March 2002. <http://www.cgexpo.com/bios/drolfe.html>.

This is the text of a speech David Rolfe, a consultant at APh Consulting during the Intellivision era. gave about his role with Intellivision. I didn't actually use any material directly from here for my paper.

Rolfe, David. Personal Interview. 26 Feb. 2002.

David Rolfe was an consultant at APh Consulting during the Intellivision era. APh was initially contracted out by Mattel, and Rolfe wrote the operating system, called the Exec, for the Intellivision system and also the Major League Baseball game. He went on to work for Activision, creating the game Beamrider.

Tam, Vincent. Personal Interview. 11 Feb. 2002.

Mr. Tam, my father, was a production manager of the Intellivision game system in Hong Kong. He had many insights into the industry and Intellivision, but I didn't specifically use any of his material in this interview because it was all well-mentioned already in my other research materials.

Tjaba, Tom. "Tom's Top 50 Most Significant Pre-Nintendo Games." Tom's Heroes. 2002. <http://www.tomheroes.com/Video%20Games%20FS/tomstop.htm>

This is classic gaming magazine writer Tom Tjaba's list of the greatest pre-Nintendo games. Included on this list were Intellivision games Major League Baseball and Utopia.