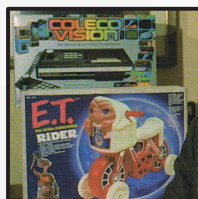
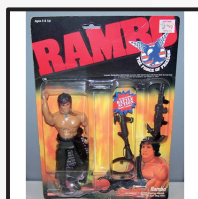
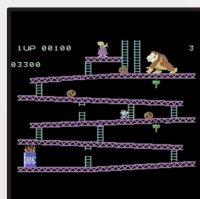
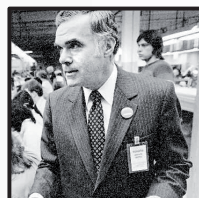
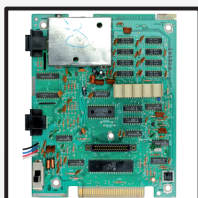
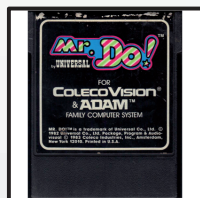
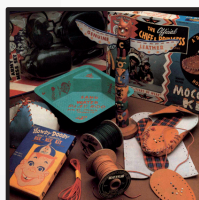
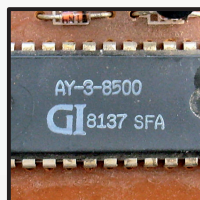




# The Official Book



Antoine Clerc-Renaud  
Jean-François Dupuis



Foreword by  
Lorne Lanning





*To Lily*

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The people at AtariAge, ColecoVision Brotherhood, All the Coleco fans around the world

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# FOREWORD

My very first game console was the ColecoVision. It was a gift to my brother and I from our Dad just a few days before Coleco officially released the “arcade machine for the home” back in 1982.

My brother and I were already quite skilled at playing arcade games. This was largely due to the fact that we both had paper routes, which may not seem a very intuitive connection at first, but considering the following.

As paperboys we were paid mostly in \$.25 coins. Add to this our early AM delivery schedules that suffered us through Connecticut’s frigid winters, and the daily albeit desperate need to secure warmth along our freezing routes at any and every possible opportunity. Fortunately, our routes just happened to be lined with truck stops, coffeeshops, and greasy spoon breakfast joints, all of which had at least one or two arcade machines. So if we were willing to part with a few bucks we could secure a high score and some warmth before we continue on our way.

What we didn’t yet grasp was that we were living through the prime conditions for what would later become known as “hard core gamers”, albeit early 1980’s versions.

I honestly had no idea I would ever wind up designing games. The thought honestly never occurred to me. I just thought I was staying warm, having fun, making money, and building up the skills to play more impressively; which might just increase my chances of picking up girls at the big arcades come Friday and Saturday night.

In the 1980s, the relationship between teen hormones and weekend arcades was well understood by teens, but not necessarily by those who were involved in building the game machines, which included my father. So we pestered him relentlessly to bring us home a ColecoVision as soon as he could.

Ultimately I think Dad thought we were excited by his work, as he was working for Coleco in Hartford, Connecticut at the time and more specifically working with the ColecoVision team as a package designer. He was more excited about his work than we had ever seen him throughout his entire career. And knowing his pride in this endeavor, my brother and I planned on taking full advantage of the circumstances.

Dad would come home and talk excitedly about the new video game machine they would be releasing. He'd go on and on about micro-processing miracles and other fascinations that allowed people to interactively move light pixels around on a TV screen, and how these little dots could be combined to create characters and environments and whole worlds, blah blah blah, none of which did we care about.

What we did take note of was the single sound bite he so often repeated, "It will be just like your arcade machines, but you'll be able play these games in your bedrooms".

That message, and all it implied, was almost too good to be true. As it wasn't brain surgery for two teenage boys to figure out that if the arcade machines could be in your bedroom, then the girls might end up there, too! And from that moment forward our mission had grown clear. The possibilities were huge, now Dad just needed to come through and bring us home a ColecoVision already. Then we could take care of the rest.

Ultimately he delivered, but like so many boys of the era, I don't recall that our primary hopes and intentions ever did work out as we had wished.

More recently, when I was asked to produce a photo of my father and I together for this book, I was devastated to discover that I was unable to locate even one photograph of the two of us together. Too many moves, too many boxes in storage, too many excuses... but no photographs.

It saddened me how easily the memories could be lost, but it reinforced for me the importance of a book on Coleco as a company and ColecoVision as a pioneering product could be.

This was a company that started off making leather hobby kits for kids. They later moved into toys, even above ground pools and Hanna-Barbara branded punch-able blow up dolls, Cabbage Patch Kids, and eventually even video game machines and desktop computers.

Coleco was a company with a fascinating history born from a family business that had proven incredibly flexible and creative through the decades. It was a history full of taking chances while embracing daring attempts with new ideas of radically different types of products for completely different sectors. It was a business that ran for decades, run by the founding family, and in so many ways

exemplified the American Dream.

It was also a company that would find itself slaughtered by the careless business practices of the dominant player in the field who tanked the business for everyone, until Nintendo brought it back in the late 1980s.

It would take me 12 years from that time to eventually enter into the gaming business myself. Since then I've bumped into numerous veterans that had emerged from the halls of Coleco to help rebirth the industry to spread video gaming across the planet. The talents that came out of Coleco would continue on with some of them that still practice the art of developing games and game hardware to this day.

Fortunately, the authors of this book have done an amazing job in revitalizing interest in Coleco's history by way of crowdfunding, which proved there was an audience that was interested in knowing more of the Coleco story.

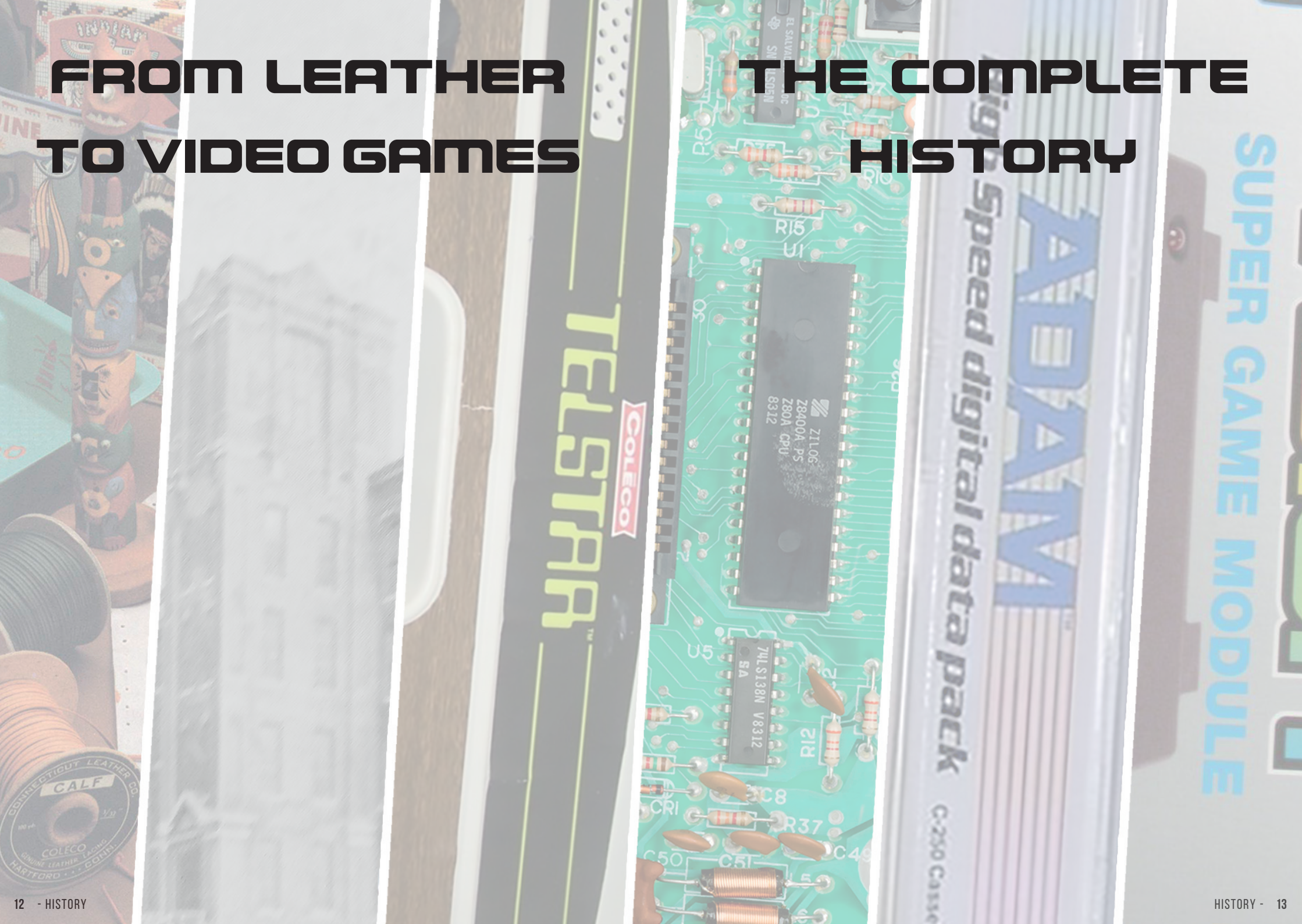
May the personalities who made it all happen never be lost and may their wild ride of successes and failures live on to inspire future gaming enthusiasts and developers.

Lorne Lanning  
Founder and CEO, Oddworld Inhabitants  
June 10, 2016



**FROM LEATHER  
TO VIDEO GAMES**

**THE COMPLETE  
HISTORY**





# THE HUMBLE BEGINNING



©Robert S. Greenberg New Haven History collection

To set the stage for Coleco's remarkable history, let's begin a few years prior to its founding, with the context that made the creation of this company possible.

## *Setting things in motion*

The United States of America has always been a land of opportunity. That famous phrase "the American Dream"—coined in 1931, just before the Connecticut Leather Company came into being—says it all. Many immigrants came to the United States for many different reasons, but most came to fulfill and achieve their own treasured dreams.

Maurice Greenberg was among them, even though he was only a young Jewish boy when he first set foot on American soil in 1911. The country



was thriving under William Howard Taft, the 27th president. Although less popular than his predecessor, Theodore Roosevelt, he led the nation with strong domestic and foreign policies—especially the latter. But immigrants were still welcome and almost guaranteed to find a job, even if it meant creating their own. That promise led Maurice's older brother to emigrate from Russia to the United States and successfully launch a moving company in New Haven, Connecticut. Alongside his brother, Maurice gained early experience with the life of a hardworking entrepreneur, and he would go on to follow that same philosophy and lifestyle religiously.

Twenty years and four presidents later, "The Star-Spangled Banner" had become the official national anthem, and Maurice had moved northeast from New Haven to Hartford, Connecticut—a small harbor state on the

East Coast of the United States, bordered by gigantic New York to the west, tiny Rhode Island to the east and innovative Massachusetts to the north. He was ready to tackle new adventures. Unfortunately for him and everyone else in the country, in 1929, Wall Street crashed and induced the worst economic crisis the world had ever known. Many people were ruined; some were even driven to suicide. The Great Depression, as it came to be known, would last until the early 1940s.

The pessimistic conditions might have discouraged the most valiant entrepreneur—but not Maurice. Even though he saw his own brother struggling with his company, he knew the value of hard work and understood what it would take to launch a business of his own. That had been his goal for a long time—and an opportunity presented itself in the harsh winter of 1932.





## Battling the Depression

Maurice had plenty of time to think and was not put off by the sight of other businesses closing down one after the other. He had noticed that one material in particular was becoming more and more popular, but there was a missing link in the industry. The material in question? Leather. The Russian immigrant would serve as a middleman between the manufacturers of the raw material and retail stores that sold to customers. On Monday, February 29th, 1932, in the heart of winter, in a leap year, the Connecticut Leather Company opened its doors at 28 Market Street, Hartford, Connecticut. Located within walking distance of the Connecticut River, the small building was just big enough for Maurice to store his supplies. The area was cozy and quiet, as the highway that now runs through it had not yet been built.

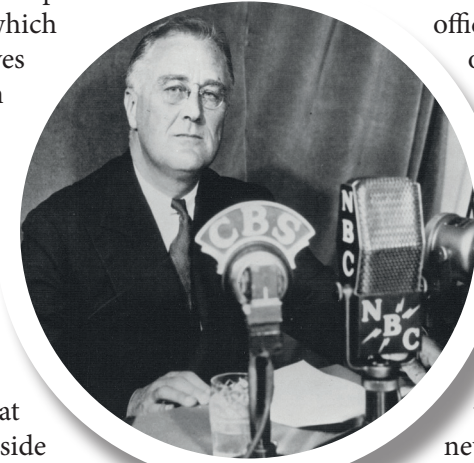
A bit more perspective: This period between the two World Wars was an extremely rough time for businessmen. The whole country was dealing with an unimaginable economic crisis. Unemployment was rising as never before. The political and economic decisions of Herbert Hoover, president of the United States from 1929 to 1933, did little to help. The Smoot-Hawley Tariff Act of 1930 created an unprecedented tax increase on all imported items—from 23% to an astonishing 59%—in an attempt to protect the U.S. domestic market, but it had little to no effect, and the economic downward spiral continued.

Meanwhile, Maurice Greenberg was finding his way as a distributor. He didn't manufacture anything. Instead, he supplied shoemakers and shoe repair shops with leather and shoe findings, the supplies and paraphernalia of their trade—heels and soles made of

leather and rubber, nails, laces, thread, even shoe polish. In lieu of negotiating directly with each of the many manufacturers that would offer them a piece or two of their needed equipment, his customers relied on Maurice to be their sole point of contact, which made their lives easier. He, on the other hand, had to chase after all the manufacturers—but the work ethic he learned at his brother's side served him well.

During its first year, the company did \$30,000 in net sales, with a \$37 deficit—quite an accomplishment, considering the era and the fact that twenty years earlier, Maurice was still in Minsk and didn't know a word of English or anything about the United States. His company grew steadily from this very encouraging starting point.

The following year was a turning point for the country and would prove to make life easier for all American residents and businesses, including the Connecticut Leather Company. When Franklin Delano Roosevelt—cousin of Theodore Roosevelt—took office as the 32nd president of the United States in 1933 after a landslide victory, the U.S. population was exhausted. The third year of the Great Depression had made many question the very credibility of American democracy. It had to end. Fortunately, the new president didn't hesitate to draft, sign and enact his famous New Deal—a new version of the Square Deal put together by his illustrious cousin—, a variety of programs that aimed to produce relief through public employment (by the time he took office, there were at least 50 million unemployed); recovery to stimulate the economy; and reform to avoid any repeat of the 1929 fiasco. LaGuardia Airport was just one result of this bold policy. As the president



Capital city of Connecticut, Hartford was founded around 1637 after a small war between the Dutch who arrived first and the English and was won by the latter. It got his name to honor the England town of Hertford.

Located in the south part of the state, it is marked out by the Connecticut River that separates it from East Hartford. It also doesn't have to be confused with West Hartford which is located, as its name implies, west to the main city. Interestingly enough, Coleco's final headquarters would be located in West Hartford from 1983 to 1989. The city is widely known for many things besides harbouring Coleco from beginning to end. For example, Bulkeley Bridge is the largest stone arch bridge in the world. Furthermore, Hartford's Old State House is the oldest one in America and was the first public building completed by the first nationally recognized American architect, Charles Bullfinch (1763-1844).



himself put it: “This great nation will endure, will revive and will prosper.”

In a famous 14-minute radio broadcast on Sunday, March 12th, 1933, President Roosevelt convinced people that hoarding money had become utterly unfashionable and that it was time to take their money out of their mattresses and deposit it back in the banks. This proclamation—the first of several “fireside chats”—took place a little more than a week after the inauguration, and already he had managed to share his vision with the country. It’s impossible to know if Maurice Greenberg heard the broadcast, but as a great leader himself, it’s easy to imagine that he did.

For Maurice Greenberg and the Connecticut Leather Company, the situation was no different than for the rest of the American people. Business was slow, but the company continued to make money. The policies put in place by the new president soon meant that both his suppliers and his customers had more products to sell and more money to spend—and Maurice needed those earnings. He had married prior to founding his company, and he

was now father to his first son, Leonard, who would one day play a major role in the family business.

Meanwhile, in countries on the other side of the Atlantic, the Depression was still gaining ground, and in some, democracy was faltering. The beginning of 1933 was marked by the appointment of a certain Adolf Hitler as the Chancellor of Germany—the man who would, less than a decade later, be responsible for one of the worst genocides known to mankind.

The next milestone for the one-man Connecticut Leather Company came in 1936, when Maurice Greenberg moved his growing enterprise to a new building with more storage space a little farther down Market Street at No. 42.

It was a time of happiness at home, as the Greenbergs were now four. Arnold, born in 1934, was the last to be welcomed into the family. Maurice was still working hard but was now helped by his elder son, Leonard. The eight-year-old was devoted to being a part of his father’s entrepreneurial journey. He spent most of his child-

hood either at school or at the Connecticut Leather Company, habits that would one day make him one of the pillars of the company.

Leonard’s early tasks ranged from cleaning the floor to delivering orders (either on foot or riding his bike), managing stock and greeting clients. Eventually, when he was old enough, Leonard would begin driving the delivery truck, while his younger brother, Arnold, delivered the actual leather to the company’s customers.

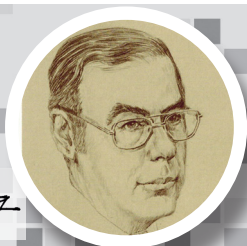
By that time, the Roosevelt administration had cut unemployment in half and doubled the national income, meaning more business opportunities for the Connecticut Leather Company. The Social Security Act was in place, and FDR was on track to take another election victory and a second mandate in the White House.

And he surely did, winning all but two states of the 48 at the time—Hawaii

and Alaska would not join the United States until 1959. Unfortunately for the president, nothing from that point went according to plan. By 1937, he had made so many enemies inside his own Democratic party that his leadership began to be questioned.

### *Failing his way to Success*

As for the Connecticut Leather Company, Maurice began to think of expanding its activities in response to something he had endured many times since he arrived in the United States: the harsh, wet winter. For as long as he could remember, this bitter season had been especially rough in New England—the Northeast of the United States of America, composed of several states, including Connecticut—where people were constantly soaked, leading to inevitable sickness. In 1938, he decided to invest in rubber equipment such as rubber boots



Leonard E. Greenberg



Arnold C. Greenberg





and the likes in provision for the next winter. With all he had seen, it was a good plan. But the winter of 1938 brought no snow at all to Connecticut, and Maurice was stuck with too much inventory that he wasn't able to sell. Retail shops were returning the supplies that they couldn't sell, either, and debts were on the horizon. Many people would have accepted their fate. But Maurice Greenberg, that great entrepreneur, wasn't ready to follow his accountant's advice to close up shop just yet. He focused his efforts on the company's leather assets, and he finally managed to sell his rubber stock during the next winter.

Around the same time, two months before the Night of Broken Glass that would see many German and Austrian Jews treated like animals by Nazi military forces, another great character with a prominent role in Coleco's future was arriving in New York. Ralph H. Baer, who would invent the concept of the video game, fled Germany with his parents for the same reason Maurice Greenberg had escaped Russia more than two decades before. On the eve of the 10th anniversary of the company, Maurice was teaching his

elder son everything he had learned, knowing that the child's future was tied to that of the company, no matter what. He had saved his enterprise from bankruptcy—a fate that would eventually come to pass, but not until several decades later. Even though the investment in rubber didn't work out as he'd hoped, the material would later prove to be important to the company in a slightly different form and for a radically different use.

In 1942, the United States was officially at war after the bombing of Pearl Harbor, Franklin Roosevelt was preparing to stay in office for a third consecutive term (a controversial choice, as the first president of the United States, George Washington, had disapproved of the practice), and the Connecticut Leather Company had been around for a decade. It was time, according to the founder, for another change of scenery. Maurice had been looking for a new place, and his eyes fell on a building at 75 Windsor Street, north of the location on Market Street but still close to the Connecticut River, an important feature for the entrepreneur. The building had previously been divided between two companies.

Pontiac Trade Post used the first floor to store used cars. The car maker was established by the parent company General Motors in 1926, and though production ended in 2009, it remains an active trademark with its flagship vehicle, the Firebird. The second floor was owned by Peerless Woodworking Corporation, a company specializing in woodworking machinery that eventually moved to Tennessee and closed only recently, on March 9th, 2015. The headquarters of the Connecticut Leather Company would stay in that building until the 1960s, the longest in any building, even after its expansion into many industries.

In 1944, shortly before the end of the Second World War, leather found a new use in occupational therapy. This discipline aimed to provide both physical and psychological reeducation, especially for wounded soldiers lucky enough to return home. The

material supplied by the Connecticut Leather Company would benefit them for many reasons—it was solid, resistant and easily cut to suit the shape and weight of its user. The new source of revenue was a sad one, but still welcomed by the Greenberg family. Nor would it be the only new venture, thanks to the teenage son of the founder, who would soon show talent in many fields, shifting the company in new directions and taking it to the next level.

### *Next Generation*

Leonard Greenberg, who was then sixteen years old, convinced his father to let him operate, as part of the family business, a small retail shop selling handcrafted leather items. Although he was still in high school, Leonard's first attempt proved to be a hit and put the Connecticut Leather Company on the map in the manufacturing



field. His idea was to sell all the necessary pieces so that customers could craft themselves their own wallets or key cases, for example. As the war was still going on and was broadcast nonstop, the young man understood that people of all ages would want something to do to keep their minds occupied. His solution also illustrated his practical mind: People would make something that they could use afterward, and they could brag to their friends that it was actually homemade. The company had only to produce the correct shapes in the correct sizes and provide the necessary lacing; the rest would be taken care of by the customers themselves.

By 1945, the war was over. FDR continued until he died on April 12, 1945. He was succeeded by his vice president, Harry S. Truman, the one responsible for the bombing of Japan in August of that year. And the future

of the Connecticut Leather Company was ensured, thanks to the work ethic and ingenuity the father had passed on to his son.

After high school, Leonard became a student at Trinity College in Hartford, close to West Hartford, and eventually graduated with an engineering degree. Once done with his studies, he set up a workshop in his father's retail store in order to design a specific leathercraft product: leather lacing. He knew it could be used to stitch many things—handbags, billfolds and so much more. The possibilities were endless. Leonard himself designed the leather cutting machine as well as the leather beveller, while his brother Arnold helped with spooling during school vacations. It was, without a doubt, a family enterprise. And this business inside the bigger business proved its worth. Demand for the leather lacing was high, though Leonard could produce only so much. He



understood right away that it could lead the Connecticut Leather Company to new heights.

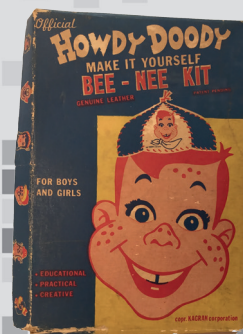
Jumping to 1949, the family-owned business was still in good shape and would soon be even better. For the very first time, the Connecticut Leather Company sent representatives to New York's leather district in south Manhattan to make a public presentation of their leather spool. It was an instant success. Numerous orders were received, and the company was officially in the manufacturing field.

One year later, the Great Depression was a distant bad memory, and the company was growing as steadily as ever. The team welcomed its newest member and the first official employee in the person of Melvin Y. Gershtman, Leonard's former classmate, who would later become Coleco's Vice Chairman and Chief Operating Officer.

The enterprise's commitment to vertical integration can be traced back to the days when Melvin and Leonard worked to keep the machines running, to control purchasing, to cut and sort and even tan the leather. During that era, they often did everything themselves, working relentlessly to have everything function as it should. As the company prepared to propose more sophisticated products, each and every one of the parts had to be perfect to succeed.

Soon, Connecticut Leather Company was making not only leather lacing but complete leathercraft kits. An opportunity arose to manufacture leather moccasin kits in a vacant glove factory in Mayfield, New York, and Leonard said yes without hesitation. He poached Ben Edelstein from a competitor, Lincoln Leather, to run the plant. With more than enough space to produce and store the new products

Kits examples produced by Coleco in the 1940s



## Hobby Project SETS

Hobby Gift Sets make an attractive, colorful gift. As an educational hobby, it keeps children and adults occupied creatively and teaches manual dexterity. Each practical project is pre-cut and pre-punched for easy assembly from illustrated instructions. No tools are needed.

4 Leather Projects in assorted colors.

- ★ WESTERN LACE-A-LINK BELT
- ★ COIN HOLDER SCOTCH PURSE
- ★ COMB CASE
- ★ CAR KEY CASE

"BIG-3" SET \$1.00

3 Leather Projects in assorted colors.

- ★ BILFOLD
- ★ CHANGE PURSE
- ★ COMB CASE

6 Leather Projects in assorted colors.

- ★ LEATHER LINK BELT
- ★ BILFOLD with I.D. CARD
- ★ 6-HOOK KEY CASE
- ★ LARGE CHANGE PURSE
- ★ COMB CASE
- ★ MIDGET COIN PURSE

"DELUXE-4" SET \$2.00

"GIANT-6" SET \$3.00

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**Leather Craft Kits**  
Coleco



of the company, it was time to think more seriously about this emerging leathercraft business.

After a few years of tergiversation about the decision, the path ahead would be laid out plainly enough for anyone to see. In 1954, the company secured a booth at the famous New York Toy Fair, an event launched in 1903 that brings together toy industry professionals, retailers and press representatives. The Connecticut Leather Company presented its leathercraft kits, and the end of the fair brought a completely unexpected result. The company's moccasin kit—materials and directions to make a pair of shoes similar to those the American Indians wore in the 16th and 17th century—was declared the Child Guidance Prestige Toy. Not bad for a \$2.98 kit. It was enough for Leonard to commit to the most important decision in the life of his family's company. After entering the manufacturing field, they would go into the toy business—but not under their brand alone. They needed names the children could relate to.

A mere two years after the fateful Toy Fair, Leonard decided it was time to bring new players on board. Con-

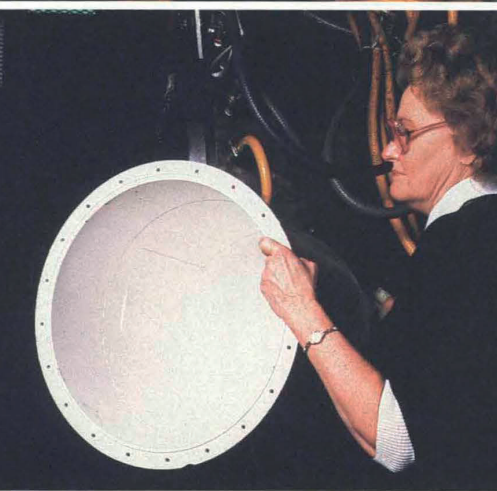
sequently, the Connecticut Leather Company, while still producing leathercraft kits, was able to use and enjoy the popularity of many different brands—a Mickey Mouse wallet leathercraft kit, Davey Crockett moccasin kits, Howdy Doody Bee-Nee kits, Chief and Princess handbags and many, many more. The success of the co-branded line of products was tremendous and went beyond everyone's expectations.

However, leather as a material had certain limitations. The Connecticut Leather Company would have to rethink its vision to remain competitive. As it happens, Leonard had recently discovered a new material that could change everything for the company. The substance in question? Plastic. The possibilities? Endless. How long the company would use it? Until the end, more than thirty years later.





# NEW MATERIAL NEW HORIZON



It was the mid-1950s. The whole world was enjoying the postwar economic boom. And to Leonard, who was on the verge of discovering this new material that we now take for granted, it was clear that the toy business was ready to welcome a new player. The Mayfield factory, which employed 50 people in upstate New York meant he had plenty of space to study plastic and its wonderful properties—setting up an unexpected metamorphosis that would change the core of Maurice Greenberg's business forever.

## *Dedicated to the family business*

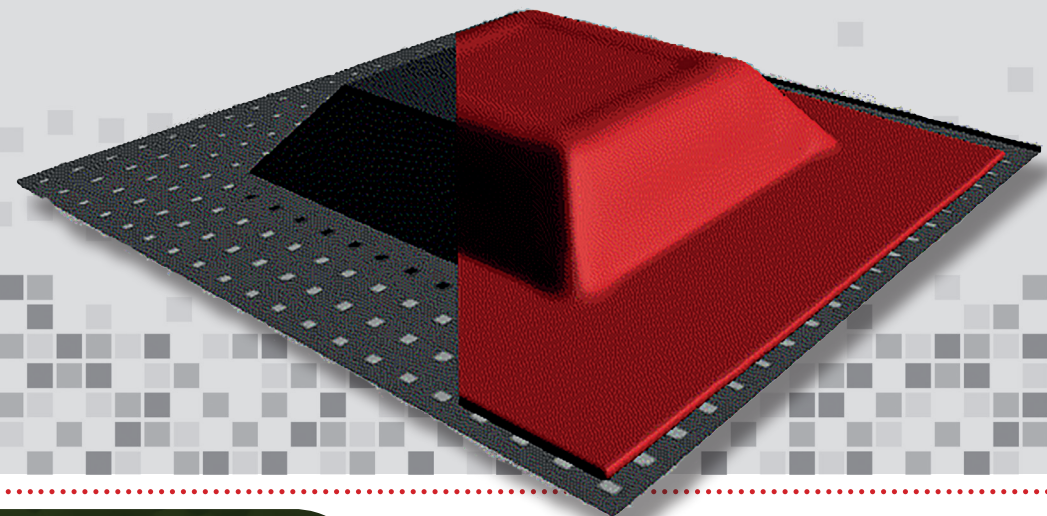
One of Leonard's goals was for the Connecticut Leather Company to begin producing finished products so customers wouldn't have to spend countless hours of their playtime building

their own toys. With that in mind, during the summer of 1956, Leonard studied all the different ways he could use plastic to create affordable, tough, but also great and bankable products. After many hours, he finally found an emerging technology that was good enough for his standards—the vacuum forming of plastic. This technique is a simplified version of thermoforming, whereby a sheet of plastic is heated to a forming temperature, stretched onto a single-surface mold and forced against the mold by a vacuum (suction of air). One of the many advantages of the process is that the finished result is of better quality than a more classic thermoformed product.

The company invested in a small machine to produce small toys at first, such as Farmscapes, a miniature farm complete with all the animals, and a miniature golf set.

But that was just the beginning. Leonard knew he could do better, and as the sun shone through the windows of the factory, it struck him. When he was a boy, during the summer, he and his brother loved to play with water—especially when the weather was very hot. Why not produce a simple pool? To build it, however, the enterprise needed a bigger and more expensive machine—one large enough to make a three-foot by four-foot shape. Before the end of the summer, the Connecticut Leather Company's first wading pool came out of the factory and was an instant success.

The next step for the company was to have a custom-built vacuum forming machine to answer its own very specific needs. Leonard spent the summer of 1957 in the Fulton County Machine Shop, studying, making designs and taking measurements for what would be the Connecticut Leather Compa-



ny's best tool to manufacture toys and other products. Fulton County, located in the eastern central region of New York State, was named for Robert Fulton, an American engineer and inventor who was widely credited with developing a commercially successful steamboat. Following in his footsteps, Leonard Greenberg was determined that he, too, would invent a device that would serve his company and in turn serve its customers.

Leonard returned to company headquarters at the end of the season with a perfectly functional piece of machinery. It was a state-of-the-art vacuum forming machine custom-built for the Connecticut Leather Company's special use. A second wading pool was produced and was again an instant hit! The company was now able to manufacture a whole new line of products, among which was a particularly patriotic child-sized army helmet, of which

more than a million were made. By this time, President Dwight D. Eisenhower was in office, starting his second term. He created the interstate highway system we know now, but he's better remembered for leading the country to war in Asia—first in Korea, in a conflict he inherited from his predecessor, Harry S. Truman, that lasted from June 1950 to July 1953, and then in Vietnam, starting in November 1955 and ending almost 20 years later in April 1975. War was everywhere, on TV and on the radio, and the Connecticut Leather Company had almost no choice but to capitalize on the trend.

### Sea, Space, and Snow

In fact, the geopolitical context of those decades served the Greenbergs' family-owned business very well. A few years later, in 1958, after hiring an extra 20 people in its factory, the Con-

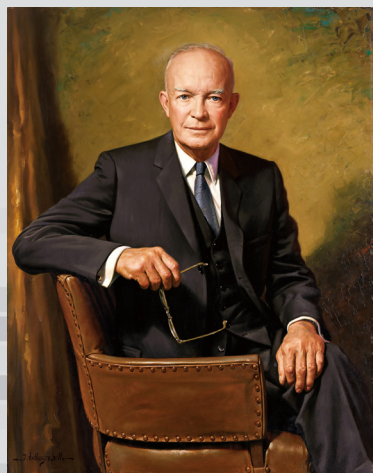


necticut Leather Company—destined for a name change, as the leather part of the enterprise was no longer viable—designed, produced and

launched a series of toy space helmets following the actual launch of the Russian Sputnik rockets. In the heart of the Cold War, which meant next to nothing to the children, they could feel like space explorers. These toys brought smiles to both the children's and the company executives' faces—they were another huge hit, proving again that the soon-to-be Coleco was unquestionably on the right path.

The management team understood that “the little nippers” loved to play outside. They saw clearly that they became even more agitated and restless

as the first snowflakes fell from the sky. Thus, the company started a new product line, responding once more to the needs of its customers. A wide range of snow coasters and toboggans meant the kids could play outside with company-branded equipment. These new toys also convinced the managers that they needed a toy of their own: an extruder. This machine would allow them to keep the manufacturing of their products cost efficient and contained in the Mayfield factory. Soon, a very large and complicated machine was in operation. It took in plastic pellets at one end, heated them and rolled them into large sheets of unbreakable polyethylene plastic, which could then be formed in turn into a variety of products.



◀ Dwight D. Eisenhower 34<sup>th</sup> President of the United States



▶ Army kit for kids from Coleco



Like the company itself, the new factory started humbly with a few thousand square feet and quickly grew to become a 1.5-million-square-foot manufacturing space with warehouse facilities. Expertise in the field of plastic toys allowed them to extrude over 32 million pounds of linear polyethylene each year. It was a new beginning for the company as the decade of the 1960s began.

In 1961, the family business' identity changed drastically. The leather supply and manufacturing departments—the very ones that started it all and allowed the company to become what it was—were sold. The very name of the enterprise, Connecticut Leather Company, was no longer relevant, now that the material itself appeared nowhere in the company's product lines. On a fateful day in 1961, the name was changed to Coleco Industries Inc., to better reflect the diversification that loomed ahead. The company created by Maurice Greenberg could face its future serenely with revenues that exceeded a million dollars, thanks to its plastic toys.

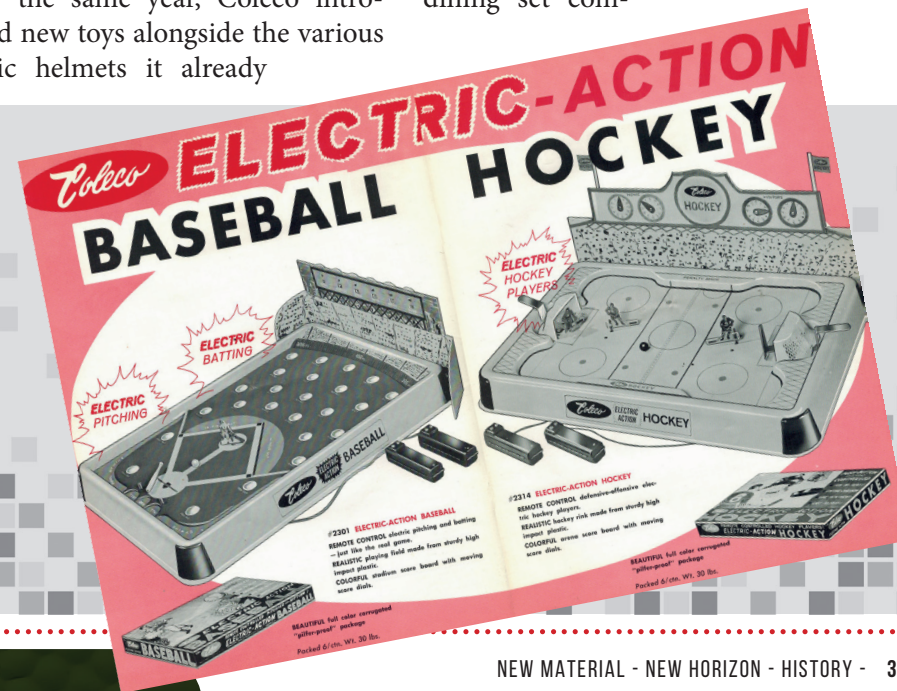
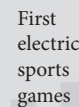
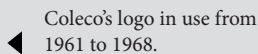
rapid growth and expansion for the renamed company. On January 9th, 1962, to celebrate the company's 30-year anniversary, it was decided that Coleco would become a publicly held company to appear on the American Stock Exchange. The initial public offering accounted for 120,000 shares at \$5.00 each.

Nor was that the only breaking news of the year. Maurice Greenberg, the company founder, decided that it was time to let his son, Leonard, officially lead the way—even if he had already done so in some sense for years by catching the trends of leather and then plastic toys. Maurice became chairman of Coleco, with Leonard as the new President and CEO, a position he would keep for 13 years.

Later the same year, Coleco introduced new toys alongside the various plastic helmets it already

offered, including puzzle games and plastic guns and rifles. But that's not all. For the very first time, the company marketed some electronic sports games that would prove to be still extremely popular more than a decade later and would be at the center of one of its key acquisitions in Canada. Two games were available in 1962: Electric Action Baseball and Electric Action Hockey. The concept had been invented in 1947 by Norman Sas of Tudor. It's noteworthy that Tudor started with and almost exclusively made electric football games, while Coleco—for unknown reasons—began with baseball and hockey and wouldn't manufacture football games until the early 1970s.

Finally, among all its toys deliberately marketed to young boys, Coleco didn't forget the girls, producing a miniature dining set com-



plete with a sink and a bride dress-up set with a comb. Such offerings would raise more than one eyebrow today, but for their era, the products and marketing were unremarkable.

By the end of 1962, the company would break the symbolic bar of two million dollars in net sales. The transition to the toy industry was complete and was providing a comfortable income, making the managers confident in the future of the company.

### *Freshing Things Up*

In 1963, Coleco made another major acquisition. Surprisingly, given the company history, the target was neither in Connecticut nor in New York. No, Kestral Corporation was in Springfield, Massachusetts. Founded in the 1920s, it had become a specialist in manufacturing inflatable vinyl pools and Puncho toys—essentially, punching bags for children. Kestral also produced steel-walled backyard swimming pools. Coleco thus dived into a whole new industry with a lucrative market.

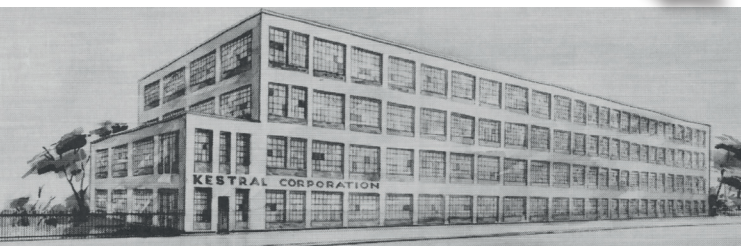
Even as an expanding catalog of Col-

eco products promised joy and happiness for the entire family, the American people grieved together on Friday, November 22nd, 1963, when the 35th president of the United States, John Fitzgerald Kennedy, was shot and killed in Dallas, Texas, during a political trip with his family. The impact on the nation and the ensuing political repercussions can be felt to this day, and conspiracy theories surrounding JFK's assassination remain vivid in people's minds. For Coleco's part, it was more important than ever to promote a happy way of life to help people forget for a few moments the tragedy that had taken place.

The acquisition of Kestral, with its backyard pools, was a source of many new water-related ideas for the Hart-



◀ Kestral factory in Springfield, MA



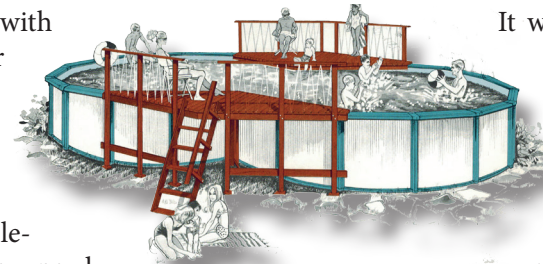
ford-based company, and in 1964, it started selling functional plastic boats for children—along with two adult-sized models. One clever innovation was a rigid wooden play pool that purchasers could fill either with water or with sand—twice the fun! To complement the newly acquired swimming pool business, Coleco also manufactured a variety of floats using polystyrene.

And Coleco continued providing equipment for water in another, colder form. In 1964, Coleco introduced what were called Sno-jet Shortie skis, a pair of small skis made of unbreakable polyethylene for children at a

fraction of the price of real skis. All the new toys and equipment would generate more than 5 million dollars in net sales for the year.

It was a new record, but it wouldn't last long.

In 1965, as the country's economy experienced its greatest boom and the people's purchasing power soared because of twenty years of post-war growth, it was decided that Kestral Corporation, under the direction of Melvin Y. Gershman, would move to Amsterdam, New York, to geographically join the Coleco family. The move not only strengthened the company's presence in the region but also ensured that all the factories were close enough that any issues to arise could be quickly



▲ Coleco facilities and factories in Upstate New York: Amsterdam and Gloversville ▼





In 1966, Coleco Industries became a complete family business as Maurice's younger son, Arnold, joined his brother and father, setting aside his success-

In 1966, Coleco Industries became a complete family business as Maurice's younger son, Arnold, joined his brother and father, setting aside his success-



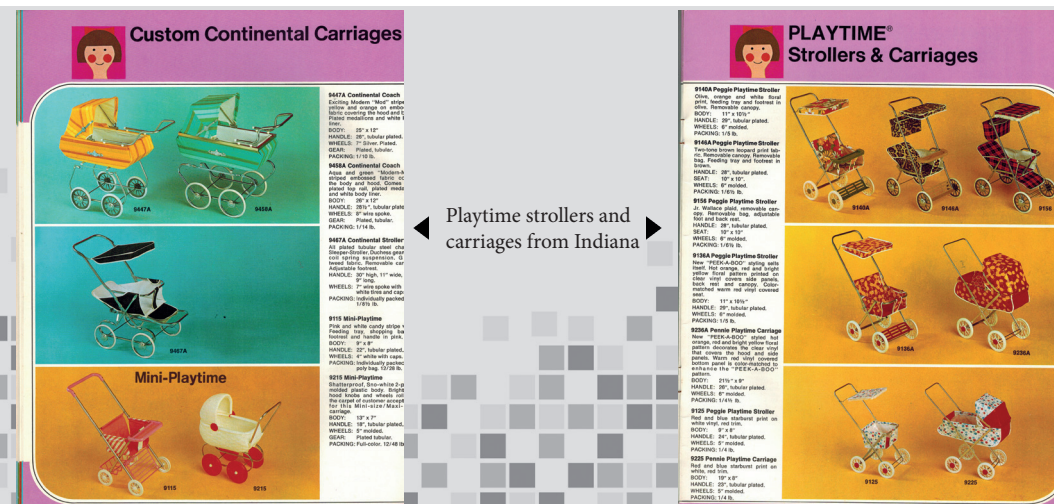
Coleco since its founding in 1932. But his big brother set out to convince him that it was time to go back to his roots, and it worked. In his new role at Coleco, Arnold would develop a certain aptitude for merchandising and marketing that would serve the company well, complementing Leonard's expertise as an engineer and business manager.

Finally, 1966 was the year when Colco relocated its Hartford headquarters from Windsor Street to 266 Pearl Street, close to Asylum Avenue, where it moved a mere four years later.

There was only a bright future in sight for Coleco Industries. The factories in upstate New York were generating big revenue across multiple departments. In 1967, the Hartford-based company

To celebrate, a modern, 126,500-square-foot distribution center was completed in Gloversville, New York. The automated facility had over 2 million cubic feet of warehouse space for finished products. It enabled Coleco-authorized dealers to receive overnight reorder service via Coleco's own fleet of diesel-powered tractor-trailers and was composed of five-car interior rail siding as well as 12 interior truck bays.

It was time again for Coleco to break out of its comfort zone—and into a new country altogether.



# CANADIAN ADVENTURES



Eagle Toys building circa 1960.

After more than three decades and as many major transitions, the now well-established and well-known company was determined to keep pushing its boundaries. Up to the north in Canada, one of the few countries still governed by Her Majesty the Queen of England, Coleco was interested in another toy company, the leader in its particular domain: designing and manufacturing tabletop hockey games.

## *New Country, New Opportunities*

Compared with Coleco's previous acquisition, Playtime Products Inc. of Indiana, Eagle Toys Limited—founded in 1943 in Montreal, Quebec—was less distant from Coleco headquarters, despite the international border between them. Eagle Toys'

Eagle Toys logo.



first offices were on Rivard Street, between the current Mont-Royal and Laurier subway stations in the very heart of that cosmopolitan city. But as Eagle expanded rapidly over the next two decades, it became clear that toy production and manufacturing required a much larger factory. Eagle Toys eventually moved into the former Dominion Textile factory, Château Saint-Ambroise, where more than 3,000 people had worked making clothes, as the labor was cheaper at that time than in the United States.

Located on the banks of the Lachine Canal, this huge, 500,000-square-foot industrial building was built in 1889 by the Merchants Mills & Co. in order to make bleached fabric. Dominion Textile bought it in 1903 and kept up full employment until 1966, when Eagle Toys decided that it was time to develop its activities to a larger scale. It had been designing and manufactur-

ing all sorts of toys, from the miniature dining sets aimed at little girls to the more sophisticated tabletop hockey games. This is precisely the reason it held such interest for Coleco. The Canadian company was one of the leaders in the tabletop hockey field, followed closely by Munro Company from Toronto, which is often cited as the actual inventor of the toys. Furthermore, the games differed in many respects from the electric hockey games and other electric sports games marketed by Coleco in the 1960s.

The origins of tabletop hockey are uncertain at best. The usual story acknowledges two Swedish brothers, Klas and Emil Widegren, as the original designers; their patent, filed in April 1951 and granted in December 1954, cites ideas that were written on paper as early as January 1941. In it, one learns that the brothers had a clear desire to make the player feel like an

Founded in 1642 by Paul Chomedey de Maisonneuve, Montreal is the second largest city in Canada after Toronto and the 18th largest in North America. Located on an island in the bilingual province of Quebec, the city is known for its large industries areas producing everything from plastic toys to cloths. Nowadays, Quebec's largest city is also one of the most reknown place in the video game industry with the biggest players such as Ubisoft and Square Enix. Consequently, the independent game developers enjoy a vibrant and brilliant community.





actual hockey athlete. The document describes the tabletop game as using either wood or metal.

However, the concept of tabletop hockey is also sometimes attributed to Donald H. Munro Sr. from Toronto, Ontario, who, in 1932, during the Great Depression—evidently a very creative period for certain people—had no Christmas gift for his children and decided to build them one. They initially used a marble instead of a standard puck, but that was quickly changed to prevent gameplay issues. Donald went on to found the Munro Company, which specialized in making such games and was, surprisingly enough, sold to an American company, Servtronic, the same year as Eagle was sold to Coleco. Both companies were considered leaders in the manufacturing of tabletop hockey games, but Eagle found a way to take advantage of the almighty and popular NHL.

Ben Stein, acting as president of Eagle Toys, got to know the game and set out to develop his own version of it. In 1955, he contacted an engineer, Bill Kobayashi, to design it for him. The only instruction Bill was given was to design a game different enough from what was already on the market to avoid any possible lawsuit. In his version, the players were close to the game board to emphasize the feeling of sliding, like a real ice hockey player. This innovation was good enough for the company to obtain its own patent, protecting the game against any possible infringement.

However, the real advance of Ben Stein's games was yet to come. He was the first businessman to hit upon a partnership with the National Hockey League to design specific versions branded for specific teams. For example, the Toronto Maple Leaf game was all in blue and white, whereas the

Montreal Canadien game was in blue, white and red. The license was expensive—Ben paid \$7,500 per team, per year, or around \$66,000 in today's dollars—but the investment was worth every penny. Sales were sky-high, as every child wanted to support the local team and new and updated versions were made available over the years.

Rod hockey, or table hockey, is a two-player game, with each player controlling a team. The puck evolved from a marble to a steel puck to a combination of both, with a plastic puck shape containing a small marble at the middle to improve the sliding feel.

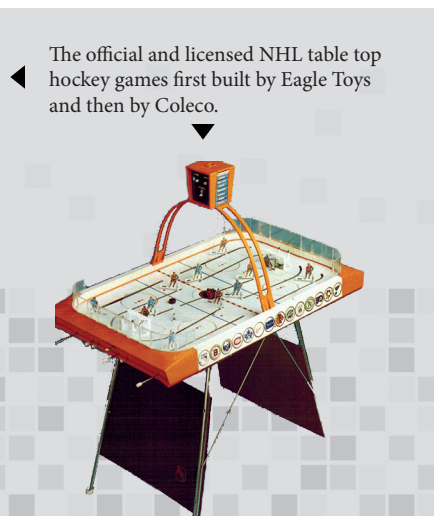
Unlike in foosball, the athletes are not in rows. As ice hockey has only six to a side, the game designers decided upon controlling each athlete individually across a restricted distance. The bars on which they are mounted move

backward and forward instead of left to right, as in foosball.

The first few versions of the game were lightly inclined, but the result was that the puck was always getting stuck at one end of the field. Later versions were as flat as a real field, which worked better and helped players imagine themselves at a real game.

At first, the games were made of wood, but the wooden pieces broke easily, so wood was quickly replaced by metal. However, metal was heavy and cost far more to produce, which led to later games being made of plastic. It was solid and cheap and could take any shape or form.

Coleco Industries became aware of Eagle Toys' success and grew more and more interested in the Canadian company. On September 1st, 1968, the Hartford company made an irresistible offer to Ben Stein. Coleco be-



came an international company, with less than 650 miles between its most distant factories. Furthermore, the purchase also brought Sports Games Manufacturing Inc. and Eagle Toys Export Corporation under Coleco's control.

The Canadian additions allowed Coleco to get even further into the sports toys business, which was booming by the late 1960s. Becoming a leader in this field also brought a seasonal balance to the company, adding indoor toys for the long, cold winters to the swimming pools and other outdoor equipment for the bright, warm summers. Eagle Toys, quickly renamed Coleco Canada, was also the second biggest factory in the company at 500,000 square feet. Inside was the most advanced Coleco technology, including heavy machinery able to build the company's most successful toys. Another factory was opened in 1969 in Ville d'Anjou, in the eastern part of the island of Montreal. Both of Coleco's Canadian plants performed a number of manufacturing operations for the U.S. main company and also supplied several finished items—rod-hockey games, pool filters, the

famous Cabbage Patch Kids—to Coleco's worldwide markets. They also manufactured or distributed in Canada certain products marketed in the United States by other toy companies. With the Canadian additions, Coleco's employees numbered more than a thousand.

For Eagle Toys, the acquisition meant a sudden arrival in the Canadian swimming pool market. The Montreal company quickly became the leader in the field before introducing other Coleco products.

In absolute terms, the changes brought about by Coleco's purchase of Eagle Toys were few. The Canadian company was already producing its own toys before the Greenbergs took over. However, in order to reduce costs, Coleco decided to replace the metal pieces of the hockey tables with plastic. Children were a bit disappointed, but not for long, as the feeling of the game was the same.

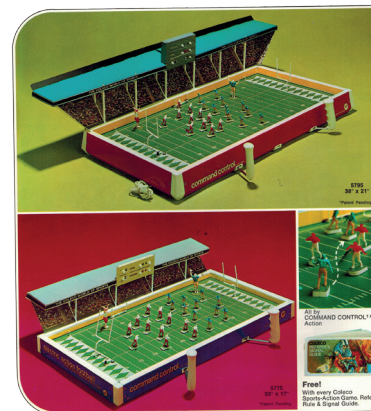
Eagle Toys was also known for its electric football games. Better known in the United States than in Canada, these complex games simulated a

football game using electrical impulses. They were about the same size as the rod hockey games, but the electric football field was far more advanced, with state-of-the-art painted metal players and buzzing sounds and shaking effects that allowed the athletes to move. Coleco benefited from the manufacturer's expertise and was able to distribute the games farther around the world thanks to its distribution fleet.

However, there were difficulties. The earliest Coleco-branded electric football games were not completely made by Coleco. Close examination reveals that only the seats and the field were manufactured by Coleco. The play-

ers, the posts, the flags and the markers were all made by the company that originally created the game in 1947, Tudor. Coleco carefully changed the colors to avoid blatant likeness between the games of the two brands. But the company didn't pay a dime to Tudor for the rights to use the players. Even worse, it didn't ask—a clear sign of the company's commercial aggressive-

ness. In Coleco's defense, its own figures and accessories were not ready in time, so someone at the company decided to use some other box with different colors, hoping that nobody would notice the trick. Tudor recognized the infringement but, surprisingly, didn't file a lawsuit. Norman Sas,



Coleco used to produce a whole variety of products for interior and exterior entertainment.



The late sixties and the out-of-the-country expansion also led to the creation of a new logo.





Tudor's president, took it as a tribute rather than an insult showing a desire to damage.

### *Being a Montreal Coleco Employee*

From the point of view of a regular Eagle Toys-Coleco Canada factory worker, life was not easy. The work environment was hostile, and Coleco management didn't hesitate to hire underage workers and school dropouts in order to have a cheaper labor force. According to some former employees, some of these new hires were so young and small that the management had to place them strategically in the factory to avoid accidents—which were happening regularly in certain departments. The loss of fingers or other limbs was a reality for the employees. Interestingly, the two Montreal plants were not equal in terms of unions. According to Sydney Greenberg (no relation to the Coleco founder's family), who was then assistant to the Ville d'Anjou plant manager, while that factory quickly came to an agreement with the upper management and signed papers to make it official, the workers of the Château St-Ambroise went on strike the very same day for

better salaries, working conditions and so on. It was the one and only time Syd Greenberg would go into the southwest factory, as he was bombarded with a wide variety of objects upon arrival.

These facts are corroborated by the internal newspapers made by the employees, from which it is evident that life was astonishingly hard inside the factory. Also, one must keep in mind that St-Henri, the area where Coleco Canada headquarters were located in Montreal, was not yet the vibrant small village with its designer lofts. As beautifully described in Gabrielle Roy's first book, *The Tin Flute*, this neighborhood of the city was extremely poor and in direct contrast with the shining lights of downtown. People who lived and worked there didn't have the luxury to go anywhere else. At some point, the area had more factories than houses. Furthermore, any teenagers who didn't want to go to school anymore—a problem that still cripples Quebec society today—had an easy alternative in going to work for Coleco Canada.

The pay was as low as one might expect—a minimum wage of \$2.30 per hour in 1975, according to the internal

papers. One such publication reveals that a loyal employee of more than twenty five years was entitled to a rolling \$2.58, if he or she was lucky. Sadly, seniority didn't count for much in the Greenbergs' company. The articles made it clear that the union was more of a smokescreen than a true protection for the workers' interests.

As these articles were published in Canada, a bilingual country to its core, some were written in both French and English. Predictably, as the product of a team of workers who were probably mostly dropouts, the articles are far from perfect, linguistically speaking, but they are evidence of an effort to do something so that employees would be heard. Thanks to some carefully crafted cartoons, the internal newspapers are also fun to read, even though the contents are somewhat depressing. Eventually, the workers did make their voices heard by the bosses and obtained better working conditions,



as well as a better salary and some additional vacation days.

A year after acquiring Eagle Toys, in 1969, Coleco made another new acquisition in Canada, Herlicon Metals and Plastics. It was established in 1953 at 3815 Ruskin Street, which has since become Everett Street, not far from the current St-Michel subway station. Located in the eastern part of the city, it would have given Coleco excellent placement geographically speaking. But the factory was too small for a number of reasons, and Herlicon was

Examples of metal and plastic pieces manufactured by Herlicon.



Former Coleco/Herlicon factory in the Eastern part of Montreal.





moved in 1972 to Ville d'Anjou, farther to the east of the island, at 10700 Parkway Boulevard. As of May 2016, the Herlicon building was still empty, available for sale or for rent.

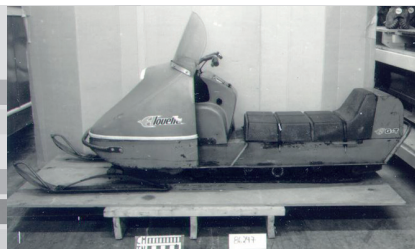
As the name implies, Herlicon Metals and Plastics manufactured metal and plastic pieces for various uses. Coleco became interested because Herlicon owned the state-of-the-art injection molding machinery and technology needed to manufacture the many items Coleco offered its customers, from Eagle Toys sports games to above-ground swimming pools. Buying the factory enabled the Hartford company to do everything in one place in Canada, instead of having to produce one part of a toy in the U.S. while the other part was made north of the border, requiring the further step of assembly. With this new factory in its quiver, Coleco was ready to tackle the Canadian market—but the frenzy of acquisition was not over.

Coleco's Canadian venture reached another landmark in March 1972, when the company celebrated its 40th anni-

versary with the acquisition of Featherweight Corporation, manufacturer of Alouette Snowmobiles, for an astonishing 2 million dollars. It seems Coleco wasn't diversified enough for its managers, who wanted the company to continue its ascension in the winter equipment market.

Featherweight, at 37 Saint-Patrick Street, was just a stone's throw from the main headquarters of Coleco Canada in the southwest of Montreal Island. However, in a twist that recalled New England's dry winter of 1938, the winter of 1972 produced little actual snow, resulting in barely break-even operations.

And yet 1972 was a milestone year in the snowmobile business. It was the year when Yamaha, the famous Japanese company and zaibatsu, maker of motorbikes as well as musical instruments, went into the sled business, garnering \$455 million in corporate revenues. It was also when Arctic Cat opened up shop in the same field.



One of the many snowmobiles produced by Featherweight Corporation.

There were around 20 different companies fighting for the market, and only four of them remain today, including Yamaha, which became the leader with \$16 billion in corporate revenues in 2012. The rough competition could explain why Coleco didn't manage to turn things around, even though it changed the company's name in 1973 from Featherweight Corporation to Alouette Recreational Products Ltd., in hopes of making the brand stick in people's minds.

The oil crisis hit the world hard in 1973, and the snowmobile business was scarcely immune, as they ran on gas like any motor vehicle. Just three years later, Coleco's executives decided that this branch needed to be cut off, as it hadn't produced the expected revenue for the company, required a true expertise and was more difficult than anticipated. Distribution wasn't the problem—Coleco had a wide net-

#### SNOWMOBILE STOCK PRICES

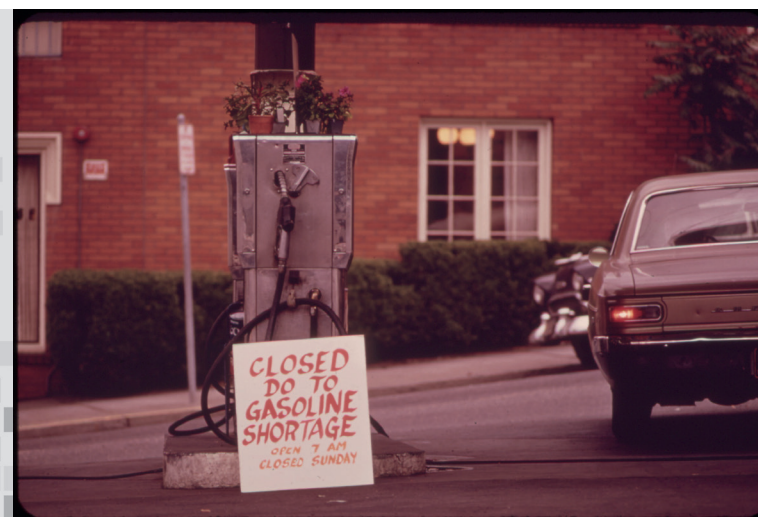
Company	1972 Price Range	Recent Price
Arctic Enterprises	40 <sup>7</sup> / <sub>8</sub> –25 <sup>1</sup> / <sub>4</sub> <sup>2</sup>	28
Bombardier	9 – 7 <sup>1</sup> / <sub>4</sub> <sup>3</sup>	77 <sup>3</sup> / <sub>8</sub>
Coleco	59 <sup>3</sup> / <sub>8</sub> –45 <sup>2</sup>	567 <sup>3</sup> / <sub>8</sub>
Coleman Company	37 <sup>7</sup> / <sub>8</sub> –28 <sup>3</sup> / <sub>8</sub> <sup>1</sup>	34 <sup>3</sup> / <sub>4</sub>
Conroy, Inc.	15 <sup>3</sup> / <sub>8</sub> – 9 <sup>1</sup> / <sub>4</sub> <sup>1</sup>	11 <sup>3</sup> / <sub>8</sub>
Fuqua Industries	27 <sup>7</sup> / <sub>8</sub> –207 <sup>8</sup> / <sub>8</sub> <sup>2</sup>	22 <sup>1</sup> / <sub>2</sub>
Outboard Marine Corp.	58 <sup>7</sup> / <sub>8</sub> –43 <sup>1</sup> / <sub>2</sub> <sup>2</sup>	55
Rupp Industries, Inc.	11 <sup>1</sup> / <sub>2</sub> – 5 <sup>5</sup> / <sub>8</sub> <sup>1</sup>	5 <sup>5</sup> / <sub>8</sub>
Textron, Inc.	36 <sup>3</sup> / <sub>4</sub> –30 <sup>1</sup> / <sub>4</sub> <sup>2</sup>	33
Yamaha	4 <sup>1</sup> / <sub>4</sub> – 2 <sup>1</sup> / <sub>2</sub> <sup>1</sup>	3 <sup>1</sup> / <sub>2</sub>

<sup>1</sup>Listed American Stock Exchange. <sup>2</sup>Listed New York Stock Exchange. <sup>3</sup>Listed Montreal & Toronto Stock Exchange; price in Canadian dollars. <sup>4</sup>Over-the-Counter bid prices.

#### SNOWMOBILE STOCK PRICE INDEX

Issue of SNOW GOER Trade (100 = June 1970)

May 1972	June 1972	July 1972	August 1972
170.00	162.60	168.73	158.21
Dow Jones Industrial Average			
966.29	942.20	944.08	938.06



work built from scratch and also those it had acquired through purchases—but it simply wasn't enough.

On January 21st, 1975, Coleco sold its Alouette Snowmobile division for an undisclosed amount of cash to Rupp Industries in Mansfield, Ohio, laying off 50 workers in the process. Only five employees were eventually relocated to the new home of the company, though the Montreal sales office was kept. However, Rupp filed for reorganization under the federal Bankruptcy Act in February 1976.

Coleco, meanwhile, kept going, and business was about to get a bit better. During the second half of the 1970s, Arnold Greenberg became the president and CEO of the company and led it into the dawning video game industry with the Telstar, Coleco's first video game system. But the 13 later models could never match the success of the original, leading to some unexpected and unprecedented losses for the company.

Coleco's video games were either designed by an in-house team led by Eric Bromley, who was hired from Midway

in 1976 specifically for that purpose, or outsourced to Sanders Associates, led by none other than Ralph H. Baer, but they were manufactured both in the company's upstate New York factories and in Montreal. This was done specifically in order to have bilingual games. Technically, then, Quebec's metropolis was a game-making city long before "Baby Frogs" was developed in 1982 (the first published Canadian game, made by two teenagers on and for the Apple II), before Softimage was created in 1986 and certainly before Ubisoft arrived in 1997.

### *The End of an Adventure*

However, the 1980s would prove to be a challenge everywhere in the world, and particularly in Canada and Quebec, where the province asked its population through a referendum on May 20, 1980, whether to pursue secession from Canada. The "No" vote prevailed with 59.56% support, dropping the territory in a malaise that stuck around for a long time, especially after a second failed referendum on October 30, 1995. Furthermore, the economic recession had left Coleco in bad shape, resulting in layoffs in all its offices and

factories in the mid-1980s, including the Canadian plants. In Montreal, 265 people were let go at once in 1985 because of the bad economy combined with poor decisions that led to the short-lived Adam computer. It's said that Coleco's losses were so enormous that the company couldn't even pay to dispose of the stock that was piling up and would dump it into the Lachine Canal. The truth of the tale has never been established, and a brave team of scuba divers would be needed to look for Coleco's lost Canadian treasures.

Shortly afterward, the factories of St-Ambroise and Ville d'Anjou closed their doors, in 1987 and 1988, respectively. After a brief move to Saint-Patrick Street, on the other side of the Lachine Canal, Coleco sold all its remaining property in Montreal and set up a sales office in Mississauga, Ontario—in the suburbs of Toronto—until the closure of the whole company in

1989 as described in chapter 6.

Back in the US, the 1970s proved to be extremely challenging for Coleco and his soon to be new president—Arnold Greenberg who would lead the family business to new high and low in what was most certainly the most exciting adventure of all for Coleco Industries.



Founded in 1986 by Daniel Langlois, Softimage worked on movies and games in 1990s before being bought successively by Microsoft and Autodesk.



## Rupp Buys New Snowmobile Line

Rupp Industries, Inc., of Mansfield announced today it intends to purchase the Alouette line of snowmobiles from the Montreal, Canada, firm of Coleco, Ltd., and will boost its employment for manufacture of the Canadian line at its Airport Rd. plant.

E.L. Fochtman  
... predicts  
30 new jobs



Rupp bought the Alouettes snowmobile business from Coleco before filing for bankruptcy one year later.

receivable aggregated \$720,000. In February 1976, Rupp filed for reorganization under the federal Bankruptcy Act. It was not possible to determine the outcome of the reorganization proceeding, its effect on

Established in Montreal with 20 people, Ubisoft Montreal has now more than 3,000 employees.



# A BLOOMING INDUSTRY



Coleco hit a few homeruns in its home country, the United States, while conquering Canada at the same time. In August 1968, the company acquired Klauber Games, a forty-year-old Chicago manufacturer of table tennis tables, basketball backboards and hoops as well as shuffleboard sets. That same month, Coleco was listed on the American Stock Exchange (and later, in 1971, on the New York Stock Exchange) under the ticker symbol CLO.

Throughout the course of its long history, Coleco has never been shy about jumping into new industries. After practically building the plastic toy industry from scratch and diving into the swimming pool business—becoming a leader in both fields—the company would soon find it necessary

to capitalize on the strength of its diversity.

The oil crisis of 1973 and the following period of recession and inflation were particularly devastating for Coleco. The global crisis had Coleco's truck fleet stuck in the warehouse; deliveries to clients could not be made, and losses began to pile up. However, the fat lady had not begun to sing yet—and the company was about to make a particularly interesting move.

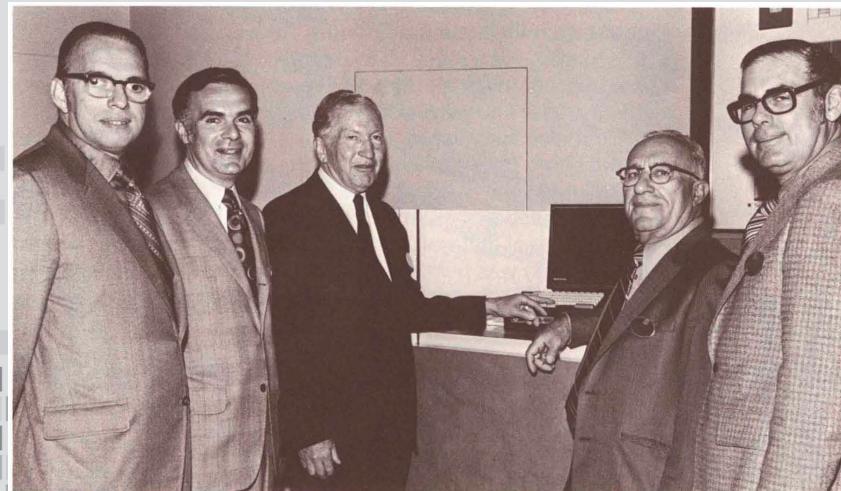
After the crisis eased in 1975, Coleco Industries reshuffled its top management. Arnold Greenberg, who had come down to work for the family company less than ten years before, was named Chief Executive Officer, a position he shared with his elder brother, Leonard. However, Maurice's younger son was also the president of the company, while the elder one remained vice-chairman of the board.

The father was still chairman at the time and would retire one year later.

Together, the siblings would steer the company through new and uncharted waters for better and for worse. Arnold in particular wanted to explore an industry that seemed to have a lot of potential: electronic and video games.

This was certainly not just a pipe dream. In the early 1970s, Arnold had heard of an inventor named Ralph H. Baer, who was working as an electrical engineer for a military contractor located close to them on the East Coast. The first time the two men met was in the offices of Marvin Glass and Associates, one of the largest independent toy and game designers in the country, based in Chicago. Basically, they were building and manufacturing games based on clients' directions and specifications. For example, they

May 25, 1971, first day of trading on NYSE. From left: Melvin Y. Gershman, Arnold Greenberg, a NYSE official, Maurice Greenberg and Leonard Greenberg.



were the ones who built the popular game Simon, invented by Ralph Baer himself, for Milton Bradley. The inventor claimed to be working closely with Coleco at the time; however, only one game, Tapper for ColecoVision (1984), was actually proven to be made by MGA.

During this first and fateful encounter, Ralph Baer was meeting with Coleco to showcase his newest invention: Monday Nite Football, the ancestor of football simulation games. For such games at that time (1976), MNFB was pretty elaborate. Before the actual play started, the players would decide on the path across the field that their quarterback would take during the game. In order to make this possible, the inventor, with the help of George Mitch, had built a big wooden controller with eight directions for the player to choose from. Once the game started, the players had a very basic top-

down view of the football field, and acted as their team's coach. Although it was very basic by modern standards, it was still advanced enough for 1976 to impress most of the people who saw it in action. In order to design this very early video game, Ralph Baer also received some help from Lenny Cope, as well as from Tom Mortimer and Ollie Holt.

Nevertheless, the game was a hard sell to companies who had never heard of video games and who mostly saw the relative craze for the Magnavox Odyssey—the very first video game console invented yet again by Ralph Baer—as a temporary fad. Out of all the people who were shown the game, none of them would eventually bet on it. That's really a head-scratcher, since the second video game console in history, the Fairchild Video Game Entertainment System (or Channel F) was released in 1975 and would be quite a success.

So, Coleco did not jump in, as Arnold Greenberg had other plans in mind. He did keep in touch with Ralph Baer, however, because he was honestly impressed with his work. The inventor would later recall how deeply interested Arnold was with the development of electronics and devices that could be plugged into a TV. Arnold saw the tremendous success of Sears' Tele-Games home system—which was actually Atari's Pong—during the 1975 Christmas season. To build on their successful venture in the arcade world, Atari wanted to invade the home entertainment market via a miniature (compared to their arcade counterparts) version that could be plugged directly into the family TV. According to a memo written by Nolan Bushnell himself, this project got its start in 1973. After seeing that enthusiasm for their Magnavox Odyssey unit was

waning, it was time to hit the shelves with something new, cheaper and improved. Design really began in 1974 in Atari's offices, guided by Harold Lee, Al Alcorn and Bob Brown. This home system version of Pong—then code-named Darlene—was going to make use of one of the first video game chips, similar to the one that would equip the soon-to-be Telstar.

This is how the company's first foray into the dawning video game industry began. Even though it was still early days, the new president of Coleco knew that the industry was going to be big enough for new players to try their luck. The idea was for the company to get even more diversified than it already was.

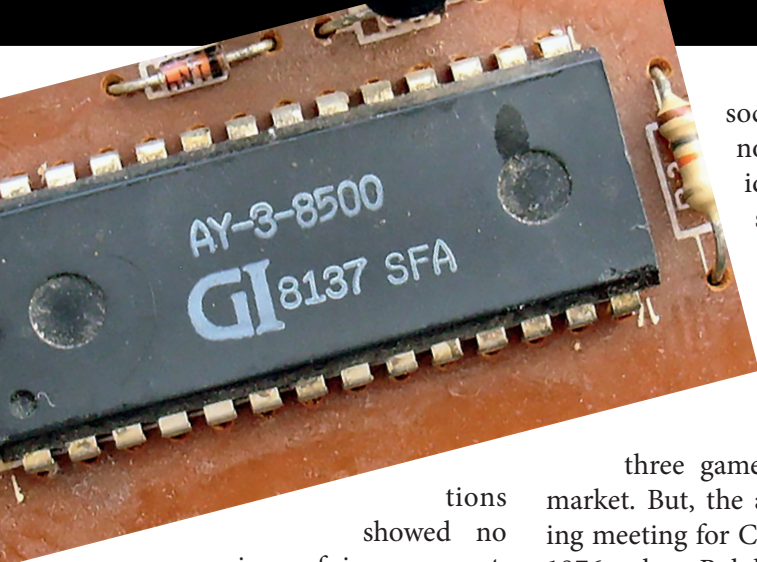
At the same time, it was still a very troubled period for Coleco, as its losses were not decreasing and economic condi-



The Magnavox Odyssey or the very first video game console using cartridges.







tions showed no signs of improvement. The enterprise had to find a new idea to get out of this dead end. Although it defied the conventional wisdom of the time, video games would come to the rescue.

Although we still don't know to this day how the development of the Telstar game console actually started, we do know what were used in terms of internal components and the people who were involved in the process. Unsurprisingly, the rise of Coleco in the emerging video game industry was made possible thanks to the tireless help of Ralph Baer. As both Arnold and Ralph stayed in touch with each other, the inventor from Sanders As-

sociates was able to notify Coleco's president each time he saw something that could have been of interest. In February 1976, National Semiconductors released a chip containing

three games onto the British market. But, the actual game-changing meeting for Coleco was in March 1976, when Ralph Baer met Dr. Ed Sacks from General Instrument in their offices in Hicksville, Long Island. The engineer went there responding to an invitation he received from Sacks. He was then shown a revolutionary piece of hardware—the multi-game AY-3-8500 processor—a chip that would soon be present all around the world in the majority of the early video game productions of that period. Coleco would be the first company to ever use it—and on a massive scale.

The AY-3-8500 was created by Scottish engineer Gilbert Duncan Harrower in GI's Scotland offices in the town of Glenrothes. When Ed Sacks first heard about his invention, he brought two

engineers from that branch to Hicksville and asked them, after studying the processor's capabilities, to adapt it to the NTSC format so it could be used all over North America. (Europe and Oceania, with the exception of New Zealand, used the PAL standard for display purposes) According to Ralph Baer, they never went back to the United Kingdom.

The demonstration that the inventor was invited to was not only about the chip itself. Indeed, it was plugged into a screen and was actually playable. It was much like when Nintendo, Sony or Microsoft asks a popular inventor to showcase an upcoming new system. Ralph was able to test the product, and he really liked what he saw. As an engineer himself, he asked to see the chip schematics and realized that, for once, it was not complicated and possible to mass produce. He was very excited by all the possibilities offered by this tiny

piece of hardware.

As soon as he got back to New Hampshire, Ralph phoned Arnold Greenberg directly in order to tell him what he had just seen. He remembered that the new CEO of Coleco told him that he wanted to get into the video game market. The inventor told him that, in order to do so, Coleco would have to send someone over to Hicksville to see the General Instrument chip.

The Coleco Industries president met Ralph there. After a very successful presentation from GI's engineers, Coleco made an offer, and thus became the very first company to mass

Ralph Baer was the father of video games and an extremely talented engineer.



GENERAL  
INSTRUMENT

General Instrument logo.

order the AY-3-8500 chip, which would equip most of the Telstar machines. This turned out to be a master stroke, as it placed Coleco at the top of General Instrument's list of orders before GI started to have trouble meeting demand. Being the first made all the difference, as Coleco was the first to be supplied. This also marked the beginning of a long and fruitful collaboration between Coleco and Ralph Baer.

### *A Savior Named Telstar*

To recap, in the middle of the 1970s, Coleco needed to do something to get out of the dead end it found itself in. The video game industry appeared to be the perfect solution, as it was burgeoning and full of possibilities, especially after the company had signed their first mass order with General Instrument for the multi-games chip AY-3-8500. It was now time to build a console around it.

Led by the Greenberg brothers, Coleco gathered a team of engineers and went to work. Even though the possibilities were big, the built-in games would be Pong variants, or rather Ping-Pong, Ralph Baer's version, which would earn him some royalties.

As one might expect, developing a video game system from scratch was fraught with pitfalls—but not the expected ones. As surprising as it might seem, the development of the video game console in itself was pretty easy. As a matter of fact, Coleco could count on the many smart engineers hired for the occasion, including a former employee from Midway who would be responsible for most of the company's electronic creations, Eric Bromley. The effort led to the creation of a new division in the company creative department dedicated to research and product development. It would take on many names in years to come, such as ARD (for Advanced Research and Development). Actually, the most challenging aspect was getting the device to comply with regulations.

### *In the RFI Line of Sight*

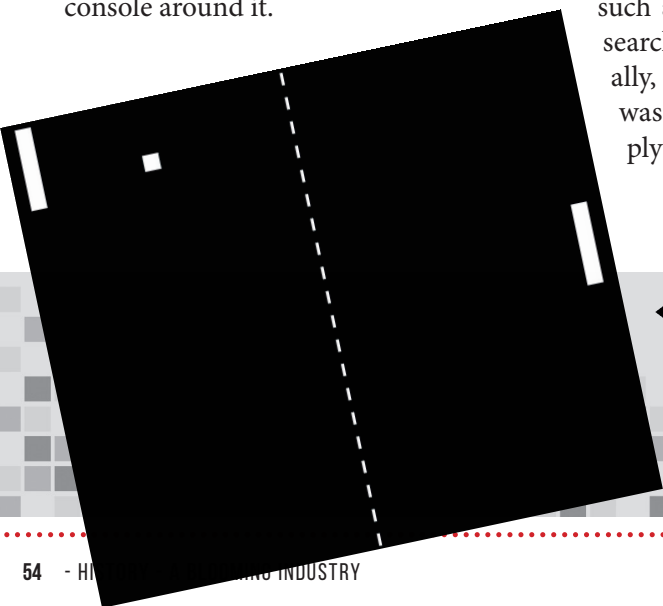
The FCC, which stands for the Federal Communication Commission, is an independent government agency founded in 1934. Its role is to regulate telecommunications as well as radio, television and nowadays internet content. It's the one agency able to prohibit indecency and obscenity in the United States.

Under FCC guidelines, each and every manufacturer of video games must submit new devices to a full range series of tests before being able to sell them to the general public. RFI, which stands for Radio Frequency Interference, occurs when components inside an electrical device emit too many troublesome or dangerous electromagnetic waves. For a product to be marketed, tests must be run to make sure that a product is compliant with regulations regarding allowable RFI

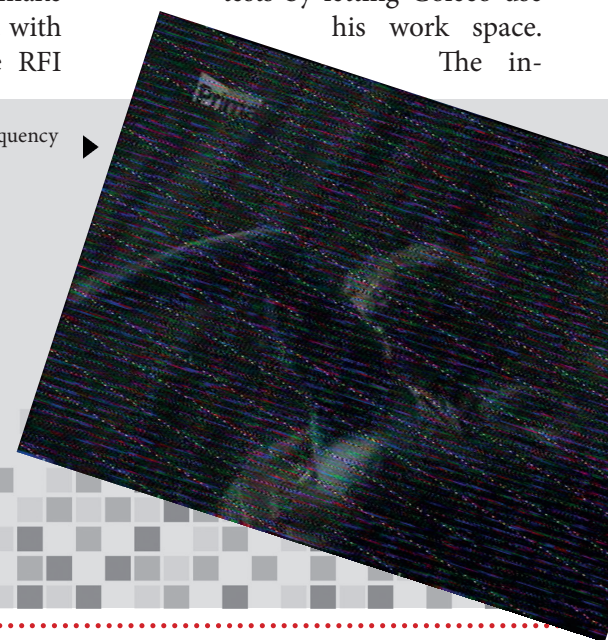
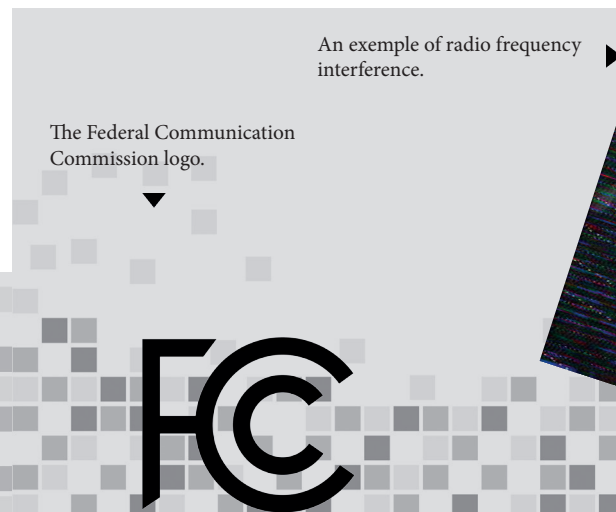
levels.

Before any electronic product can be marketed in the United States, it needs to be put through various severe tests to avoid any component heat and radio wave issues. This is important, as all companies want to avoid accidents caused by their products as much as possible, first to keep their customers happy, but also to avoid spending their time in the courtroom with endless lawsuits. Coleco's products needed to pass those tests before they could put the Telstar on store shelves and thereby take advantage of their pole position with General Instrument. Unfortunately for the Connecticut company, it didn't go without snags.

Once more, Ralph Bear saved the day. He allowed the company to pass those tests by letting Coleco use his work space. The in-



◀ The famous Pong game which became popular thanks to Atari.





ventor was still working for Sanders Associates, a big military contracting company that had various research laboratories at their disposal. On a Tuesday in 1976, Coleco,



which was a significant mode, in panic mode, contacted Sanders Associates. Arnold was phoning Ralph while Leonard was phoning Dan Chisholm, the licensing director of Sanders Associates.

The first few tests run by the FCC were not very convincing, and Coleco needed help as soon as possible. The government agencies told the company that it would be OK for them to come back a few days later with an improved product. However, if it were to fail again, it would be back to square one, and they would lose their significant competitive time advantage! However, that was not the compa-

ny's only problem. According to their business model at the time, prior to any validation, they had gone ahead and produced \$30 million worth of inventory! As they couldn't put it into circulation just yet, this massive stock was stuck in their warehouses. This pattern, which would repeat itself later on, ultimately caused the demise of the company.

This is where Sanders Associates came into play. Being able to use their laboratory to test for RFI compliance was a godsend for Coleco. Without further ado, Ralph Baer and his colleagues put their expertise to good use and found, in only two days, a solution as easy as ABC to significantly decrease the interference emitted by the Telstar. Coleco then went back to Maryland, and the video game system passed all the tests with flying colors. It was

marketed shortly after. This is how the Hartford company managed to break into the nascent video game industry. However, the collaboration between the Greenbergs and Ralph Baer was far from over.

### *Inside the Telstar*

Coleco's Telstar was their very first console (called Pong systems at the time). The nickname fits, because those machines were mostly only capable of running the game Pong and some variants, but not much more. However, Coleco had really thought this through and was going to show the world what those so-called Pong systems could really do by designing and selling way more advanced games to run on them. Anyway, the original Telstar was up and running thanks to the General Instrument AY-3-8500 microprocessor. Two potentiometers, one at each end of the machine,

were used to move the white bars up and down in the game. There were three Pong variants (tennis, hockey and handball) as well as three difficulty levels (beginner, intermediate and pro). Another interesting feature is that there were two variants of this very first Coleco video game system. The first one sported a grid through which users could hear primitive sounds. Also, the central lane on game screen was plain. The other version has no sound grid, and the central lane on game screen was a dotted line. Legend has it that the General Instrument chip was revised between the two releases. But which one came first? Like the chicken and the egg conundrum, we are left to wonder.

From an engineering point of view, the Telstar was the brainchild of a new and brilliant Coleco employee, Eric Bromley. Formerly of the Midway R&D Department, he would become



◀ The 3 built-in games included in the original Coleco Telstar.

the mastermind behind most of Coleco's electronic creations. Regarding the origins of the Telstar name, some say that it was a combination of Television and Star; others believe that it was named after the satellite of the same name that was put into orbit in 1962, becoming the first active communication device in space. Both make sense, but the true reason behind it is still a mystery to this day.



The console hit store shelves in late 1976 and became an instant hit. Even though it wasn't the first, as Atari was there a mere one year before, it didn't stop customers from buying up every available system on the market. The reasons behind this success are many. First, the retail price was very attractive. Like all of Coleco's other products, the company was better off with selling more at a low price than the opposite. It retailed at an inexpensive \$50, making it attractive and accessible to most American families. Second, the ease of use was definitely another advantage, as the user didn't have to go through a complicated manual and fumble around with cables in order to understand how to spend some quality time relaxing with their newly acquired device. The game play was basic and simple enough for anyone to understand. With two paddles as controllers, up to two players could enjoy it, be they two family members or two friends. Coleco was back on track and ready to take further advantage of the blooming video game market, which was just beginning to show its potential. It looked like clear sailing ahead—but there would be rough seas, too.

Later in 1976, a variant of the original Telstar machine, called the Telstar Classic, was released in a wooden case, but still with two fixed paddles.

1976 would be the best year so far for Coleco in terms of sales, with \$116.8 million, which represented an increase of 65% over 1975. Also, for the very first time in the company's history and since the acquisition of Kestral that led them to the swimming pool business, Family Leisure Games and Toys represented 67% of their sales, while Swimming Pools and Water Products represented the remaining 33%. Back in 1974, the roles were reversed: the former represented 36% of the total sales, while the latter was responsible for the remaining 64%.

In 1977, less than a year after taking the video game business by storm, not only had the company released its first



Pong console using a revolutionary chip that Coleco was the first to use, but it had also used its competitive time advantage to create and release no fewer than seven different Telstar systems! They felt this was only the beginning, and they were hungry for more. This might have been a harmless attitude if Coleco only built a handful of products at a time, but they preferred to manufacture thousands without the absolute certainty that they could sell all that inventory.

The new models included the Ranger, the Colormatic and the Regent, which were manufactured in Cole-



As the new company's president, Arnold Greenberg presented the products himself. Here with the Telstar, he shows how easy it is to play the game and its variants.



co's factories. The other models were outsourced to the engineer who had saved their skin by making sure the original Telstar was fixed and released in time—Ralph Baer. As his skills were already proven, Coleco trusted him to design and build a number of variants of the Telstar along with his team.



Even though Coleco led the way for the second generation of Pong-like home systems, they didn't have the resources to build every model they wanted. This is why they still relied in part on the video game master, Ralph Baer. During their collaboration, Baer and his team from Sanders Associates designed three Telstar models for 1977 alone. Among them we find the most advanced and original systems of this product line, such as the Arcade, which was known to be one of the few, if not the only,

Pong system using actual cartridges—six in total. They were triangular in shape like the console itself. This was done so that you could find a different controller for a different type of game on each side: a regular one for Pong; a gun for a shooting game; and finally a steering wheel for a racing game.

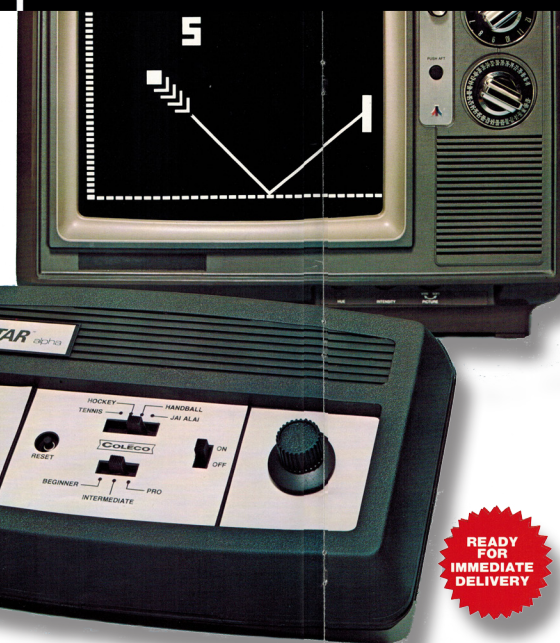
The next one they made was the Telstar Combat, which is technically not a Pong game. Instead it has a tank game embedded in its GI AY-3-8700 chip—a variation of the AY-3-8500 that equipped the original Telstar system.

Finally, Baer and his team of engineers and designers provided Coleco with help on the Telstar Alpha, a smaller size version in the product line that included a racquetball game that a single player could enjoy by him or herself.



©Collection David Winter, Paris

But, the designer of the Odyssey was not done yet, not with Coleco or even with the Telstar product line. Along the way he met with several key people from the former Connecticut Leather Company among whom we find Eric Bromley, who would become his pupil and disciple, learning anything that he could from the Simon inventor. For example, in April 1976, after a visit to General Instrument, Baer got an idea for a low-cost solution to include color in the Telstar product line. He shared the details of this brainstorm with Eric, and that is how the Colormatic was born. The collaboration between Ralph Baer and Coleco would end here regarding the Telstar, but the inventor of home video games

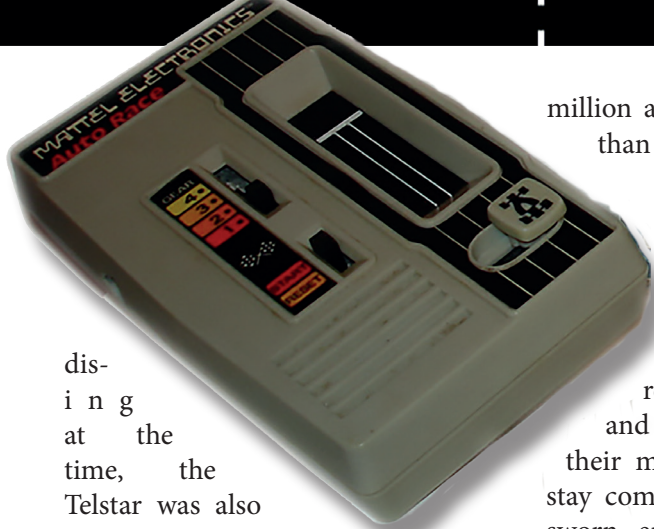


would be back to create new and innovative games for children.

While Coleco and Sanders Associates were producing their own specific models, as was common in merchan-







dis-  
i n g  
at the  
time, the  
Telstar was also  
released by Mont-  
gomery-Ward or Sears under  
different names for the different mod-  
els. With such a distribution network,  
one could be forgiven for thinking  
that everything was well on track.

However, for Coleco, the Telstar suc-  
cess had convinced them that it was  
high time for new and improved ver-  
sions. This is how, between 1978 and  
1979, another seven models were pro-  
duced, bleeding the company dry and  
leading it very close to bankruptcy. In-  
deed, because of some supply shortag-  
es from General Instrument and some  
dock worker strikes, console manu-  
facturing was delayed, causing Coleco  
to miss important deadlines, which  
then led to huge losses reaching \$22.3

million and the destruction of more  
than a million Telstar units.

Even though this first foray  
into the video game busi-  
ness nearly proved to be  
fatal, it made the compa-  
ny realize that there was a  
real demand from customers,  
and that they had to maintain  
their market presence in order to  
stay competitive. For example, their  
sworn enemy, Mattel, who gained  
fame by releasing the Barbie Doll in  
1959, was also exploring the early vid-  
eo game industry through their Mat-  
tel Electronics division and released  
Auto Race and Football in 1977, two  
portable games that were going to in-  
spire a lot of competitors including, of  
course, Coleco.

### *The Telstar You Never Saw*

Teased in Coleco's catalogue of  
1978, the Telstar Game Com-  
puter was supposed to be just  
like a regular game console,  
even coming equipped  
with rectangular cartridg-  
es. Six of them would  
have been available

at launch con-  
taining up to  
ten games that  
were all Pong  
sports vari-  
ations. With  
four potenti-  
ometers for  
changing pa-  
rameters such  
as the difficul-  
ty, the speed  
of the ball, or  
the presence  
of a robot, the  
promised game  
would have been epoch-making.

However, upon closer inspection of  
the machine itself, the joysticks were  
built into the machine and were ab-  
solutely non-removable. Even though  
they went back and forth in this ver-  
sion (the original Tel-  
star had



fixed paddles,  
as did the Al-  
pha, but not the  
Galaxy), it sim-  
ply wouldn't  
work on a more  
advanced game  
system such as  
it dreamed of  
being.

But the Tel-  
star Game  
Computer had  
some redeem-  
ing features. On

the center of the machine, a numeric  
keypad can be found. This must have  
been important to Coleco, as the same  
layout was to be used on their actual  
game console to be released four years  
later—ColecoVision.

Sadly, the Telstar  
Game Computer





met the same fate that too many video games or electronic games from Coleco would meet—it never saw the light of day.

Going Portable

During the early video game craze, Coleco was one of the few players located on the East Coast and not in touch with the Silicon Valley style of thinking. Even though it was heavily influenced by the success of its competitors, Coleco also had a clear vision about video games that would bear fruit in the early 1980s.

In the meantime, to cover for the Telstar's losses, some new games were needed. The plastic toys were continuing to sell well, and the swimming pool division was still profitable, but thanks to the success of the Telstar, they managed to get a wide range of new customers that wanted to know what was coming next from the brilliant minds capable of bringing them 14 Telstar models in

less than three years. This is how portable games were born. The very first one, Electronic Quarterback, would be innovative in many areas, not only in its game play. As the name implies, it is a football game designed to take on Mattel's Electronic Football, taking advantage of the year that separated the release of both portable devices. Indeed, Coleco's game was released in 1978, thanks again to the hard work of Eric Bromley (He was responsible for two of the game's patents: one for the game and the other for the display).

In terms of design, Electronic Quarterback looked as sophisticated as its Mattel counterpart, and both screens were really small, especially by today's standards. But, back in the day, it was as if a whole new world had opened up for children. The

screen represented the football field and was used to indicate different information, such as the score, remaining time, yards to go or field position. With the help of five buttons, the player could attack, defend, pass and, most importantly, score some touchdowns. The game was powered by just a nine-volt battery that could last for quite a long time, as the game did not consume much power.

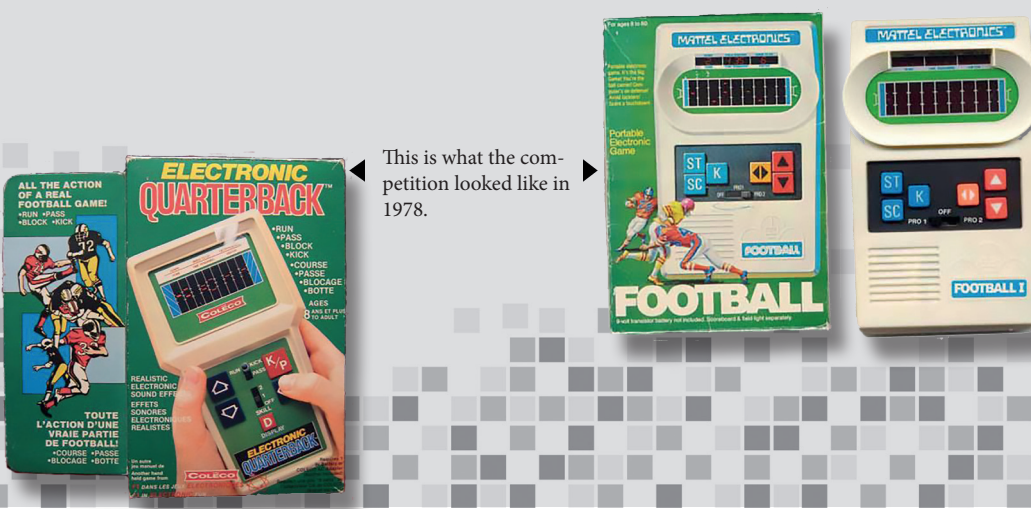
The marketing strategy for Coleco's first device was certainly memorable. Not only was the game well packaged,

with fine illustrations to showcase the sport it was about, but in terms of advertising it innovated once again. For the very first time, a video game company made use of comparative advertising. Can you guess who the target of Electronic Quarterback was? If you guessed Mattel Electronics Football, you're right! There were two men in the ad. One was wearing an Electronic Quarterback costume, while the other was wearing a Mattel Electronics Football costume. The ad, which was approved by Michael Katz as his first official act upon



of Electronic Quarterback was? If you guessed Mattel Electronics Football, you're right! There were two men in the ad. One was wearing an Electronic Quarterback

costume, while the other was wearing a Mattel Electronics Football costume. The ad, which was approved by Michael Katz as his first official act upon



starting work at Coleco, aired just in time to convince children to make the right choice. But Mattel's counterattack was just around the corner.

Electronic Quarterback was an extremely important milestone for Coleco. First, it confirmed for them that portable electronic games were the right way to go. The demand was definitely there, and with its expertise and many facilities, the Hartford company was the only one that could meet that demand at an affordable price point for the average family. Second, this very first foray into the handheld electronic games market opened the door to completely new product lines that promised continuing success to this industry pioneer. Examples include some educational games in 1978, the Head-to-Head series in 1980 or the very famous mini-arcade series in 1981.

### #1 in Electronic Fun and Video Games

One mandate of Coleco is to be the best at what they do, which is a very sound goal. The more they learned about this new business, the more they wanted to

stick to their policy and offer a product for everyone in the family. That is why the period of the late 1970s and early 1980s was a very creative one for the company, during which they would release 30 electronic portable games. Luckily enough for them, the cost was heavily reduced compared to the Telstar systems that jeopardized the very existence of Coleco.

1978 would prove to be a very busy year for Coleco as the company produced four new games. Two of them were electronic learning games, and the other two were big space-themed games that were not so portable.

The first new successor to the very successful Electronic Quarterback was Digits, a puzzle game for one player, the goal of which was to guess a series of numbers chosen by the computer. If this concept sounds familiar, that's because it is!

In fact, in other countries such as France and Australia, the



game was released under the Mastermind franchise. But 1978 was not over



yet, and Coleco had another educational surprise for kids.

It was later that year that Coleco released Lil Genius. The game was a sort of a calculator that did not give you

the answer to the problem typed in. Instead, the player needed to guess the result. Lil Genius would then, using a buzzer, indicate whether the answer typed in was right or wrong.

However, Coleco was known for their toys and games, so they also needed to provide their loyal customers with fun challenges that didn't involve doing math and guessing numbers. That is why, after releasing two educational games, it was time for a space shooter game, and a heavy one at that. Space Blaster was a very peculiar item. It was a huge laser gun mounted on an even bigger box. The box was used to provide sounds as well as to project images of enemy spaceships on a wall using a very powerful light. It was manufactured and sold in such limited quantities that even the most avid Col-







eco toy collectors began to doubt its very existence. Needless to say, it is extremely rare nowadays and sells at a hefty price point.

Finally, Coleco's last electronic game for 1978 was Race Thru Space, a game in which the player controls yet another space ship. This time, however, the goal is to avoid incoming asteroids or else crash. Presented as a large tabletop game, it looks really cheap with all its yellowish and greyish plastic props, but back in the day one could feel really immersed in it. Furthermore, with the very first Star Wars movie having just aired in theatres around the world, the demand for space-themed games was still there; however, Coleco simply would not take advantage of this information—as they had other plans in mind.

1979 was a very interesting year for Coleco. They had enough time to process the idea that video games and electronic games were not a passing fad. The Odyssey from Ralph Baer and Magnavox came out in 1972 and sold pretty well, considering that it was very basic despite the fact that several games were included and it was rather complex to set up. Three years later, the Video Entertainment System (also known as Channel F) from Fairchild, the inventors of the microprocessor, was another great success offering more advanced games. But, according to Coleco, the one company that achieved the greatest success was Atari. After a few Pong home consoles that inspired the Telstar, Nolan Bushnell's company was ready to invade homes with an interchangeable cartridge system. This came in 1977 in the form of the Atari Video Computer System 2600 at a low price point and with several games available at launch, including portable versions of great arcade classics, such as Space Invaders.

Coleco was really impressed, and their first incursion into the video game market with the Telstar

enabled them to understand that they had the know-how to build one of their own. This is how the ColecoVision got started. According to former employees, the project began spreading inside the company as early as 1979.

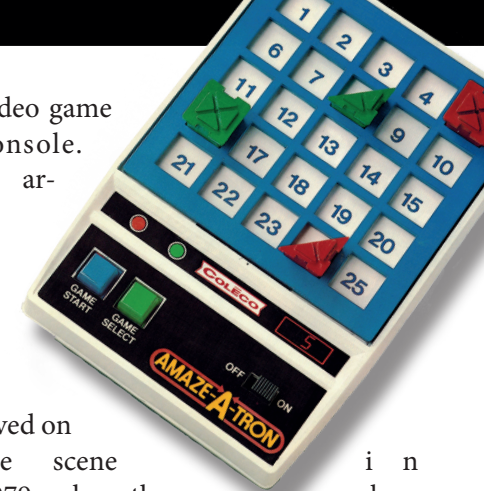
Eric Bromley was the man and the soul behind the project. He led all of his co-workers in the newly created ARD (Advanced Research and Development) to share his vision of bringing Coleco into the actual video game system business in a big way. As it was already two years after the Atari 2600 launch, and microprocessors had evolved and decreased in price in accordance with Moore's laws. ColecoVision was going to be far more powerful than the competition.

Another event that confirmed for Coleco that they were on the right track is that another one of their direct competitors, Mattel, was releasing a

video game console. It ar-

rived on the scene in 1979, when the makers of Barbie launched Intellivision, a home system with large paddles that, once again, were going to be a huge inspiration for the Hartford-based company.

But the console wouldn't be released before 1982, and Coleco had to keep offering new toys before launching its secret weapon. Among these were Amaze-a-Tron, an electronic labyrinth type of game created, once more, by Ralph Baer; Zodiac, an astrology



Video game consoles in the 1970s.



computer as Coleco called it; or Zap, a two player game similar to Pong in which players bounce a ball back and forth.

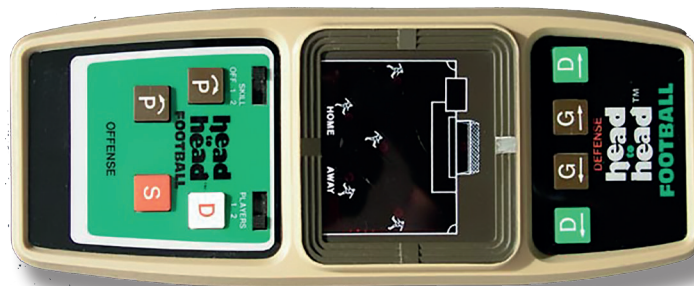
In 1980, Coleco would release the first game of a series that would win the company worldwide recognition thanks to a clever and well-thought-out concept. Following up on the success of Electronic Quarterback and in reply to Mattel's retaliation with Football II, the Hartford company was ready to unleash the first game of the Head-to-Head series, Football.

For all the games in this product line, the concept was the same: one player would play the attacker, while the other one would play the defender. To accommodate that style of game play, the rather small screen, using a liquid crystal display like any other electronic game, was placed at the

center. Specific buttons for attack and defense were arranged at each end of the device.

As a sort of Coleco trademark, the games of the series would each look different, although most variations involved different box or button colors. The only significant (and very interesting) change was made for localization purposes. In Europe and other parts of the world, where soccer is called football (while the football we know is called American football), Coleco preferred to keep the name and change the design of their game. The screen thus showed, instead of an American football field, a soccer field with players and goalkeepers. The buttons performed the same functions as in the American football version, but their names were changed to fit to the new sport. This variation would be released a year later in North America as Head-to-Head Soccer.

As expected, the title fit the



other electronic games perfectly and was a huge success. To top that, Coleco would soon offer several other sports games, such as Basketball, Boxing, Hockey, Soccer and Baseball, which was the last one to be released in 1982.

However, 1980 would be a sad year for Coleco. On Friday, January, 18, 1980, Maurice Greenberg passed away at the Hebrew Home and Hospital of Hartford, Connecticut. The one man who had started it all and had retired only four years before was leaving his wife Frances Milkenstein Greenberg and his two sons, who were now continuing what he began.

Despite this sad event, Coleco continued to produce portable electronic

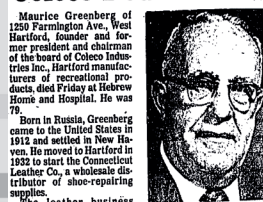
games right up until releasing their masterpiece system in 1982. As a matter of fact, 1981 would be pretty busy for the Hartford company as it was about to unleash one of its greatest successes ever in a concept that would be imitated all around the world. It's one that gamers remember fondly—the mini-arcade.

Developed internally by Coleco's own development team for Advanced Research and Development, the mini-arcade's goal was to bring the joy and advanced game play of the arcade to the home. It succeeded beautifully, carefully choosing among which arcade games to license. This was indeed the heart of the battle, but Coleco, as an experienced tactician, already knew what to do and who to talk to. They had been used to this kind of deal since the



Maurice Greenberg Dies at Age 79; Coleco Founder

## Maurice Greenberg Dies at Age 79; Coleco Founder



Maurice Greenberg of 1250 Farmington Ave., West Hartford, founder and former president and chairman of the board of Coleco Industries Inc., Hartford manufacturer of recreational products, died Friday at Hebrew Home and Hospital. He was 79.

Born in Russia, Greenberg came to the United States in 1912 and settled in New Haven. He moved to Hartford in 1932 to start the Connecticut Leather Co., a wholesale distributor of shoe-repairing supplies.

The leather business evolved into Coleco Industries Inc. in 1962 and Greenberg became chairman of the board. He retired in 1976.

He was president of the Maurice Greenberg Family Foundation, which supports charitable causes in Greater Hartford and Israel. He was a former chairman of the Hebrew Day School in the Hebrew Academy of Greater Hartford.

He was a past president of Chevrah Lunday Mishanais Synagogue of Hartford, a life member of the Zionist Organization of America and a member of B'nai B'rith.

He leaves his wife, Frances Milkenstein Greenberg; two sons, Leonard Greenberg

and Arnold Greenberg, both of West Hartford; a brother, Samuel Greenberg of Ramapo, N.Y.; a sister, Mrs. Harry Davis of Boca Raton, Fla., and four grandchildren.

The funeral is Sunday, 2:30 p.m., at the Weinstein Mortuary, 640 Farmington Ave., Hartford, with burial in Temple Beth El Cemetery, Avon. The memorial week is at the home of his son, Leonard Greenberg, 57 Mountain Farms Road, West Hartford.

Memorial donations may be made to the Israel Emergency Fund, c/o the Hartford Jewish Federation.





1940s, when they released leather craft kits using Disney licenses for characters such as Mickey Mouse or Davey Crockett. Al Khan and his team managed to secure the rights to the following arcade games: Pac-Man, Frogger, Galaxian, Donkey Kong, Ms. Pac-Man, Donkey Kong Junior, Zaxxon, Berserk and Omega Race. Unfortunately for gamers, not all the licensed games would come out, although all but a couple did.

Visually, they were miniature arcade cabinets (hence the name mini-arcade). All the original details were respected from the joystick to the buttons. Contrary to what was expected, the screen didn't use LCD or Liquid Crystal Display simply because this technology wasn't ready back then. This is why VFD for Vacuum Fluorescent Display was chosen and also because

it was the cheapest technology available in the

early 1980s. Developed by Philips in the late 1950s, this new kind of display was extremely used in the 1980s from cars' dashboard to calculators. Even though it emitted a light blue light, companies such as Coleco usually used transparent coloured filter to obtain a specific color. Furthermore, as the miniature arcades were supposed to work with batteries that would get drained very fast, the Hartford company realized that there was something they could do. When checking the bottom of the handheld devices, there is no AC Adapter plug. This was done on purpose so users would need the Perma Power. Developed by Coleco, these battery substitute look exactly like the C batteries required to play the game but one of them has a C-cell connector. Included in the package, the AC Adaptor lets the player enjoy the game from a regular AC outlet. Coleco had really thought this through: the feeling was more or less the same as the original arcades, and for only \$50, their original price, the player was able to enjoy unlimited gameplay. Except for Donkey Kong Junior, which is still considered part of this product line, all of the other titles used the classic, original designs,



a strategy that was particularly effective and useful.

Building these unique toys was very demanding at the time, and the employees were working with very few tools. However, it was also a fundamentally fun job for the designers. As their job was to find a way to convert games contained in big arcade machine into small portable devices, the first step was, naturally, to study the original game concept. In that field, this means testing the game and it required a great deal of play to en-

sure the quality of the game. But this wasn't all fun and games, as the team of designers and copywriters would need to take heavy notes in order to identify not only the fundamentals of the game but also what made it fun. This documentation was then given to the programmers, who would use Apple II computers to write the program code using very early executable programs that were not as advanced as the IDE—Integrated Development Environment we know today. Instead, their software was basic text editors without colored text or even debugging features. Finally, the last part of the process was to have a skilled team of engineers burn the program into chips that would constitute the heart of the device.

When Pac-Man came out in 1981, it was a huge hit. The countless working hours of Coleco's teams proved to be well worth it, as the kids in North

The Perma Power battery eliminator was a way for Coleco to capture the consumer even in what they use to play their games.





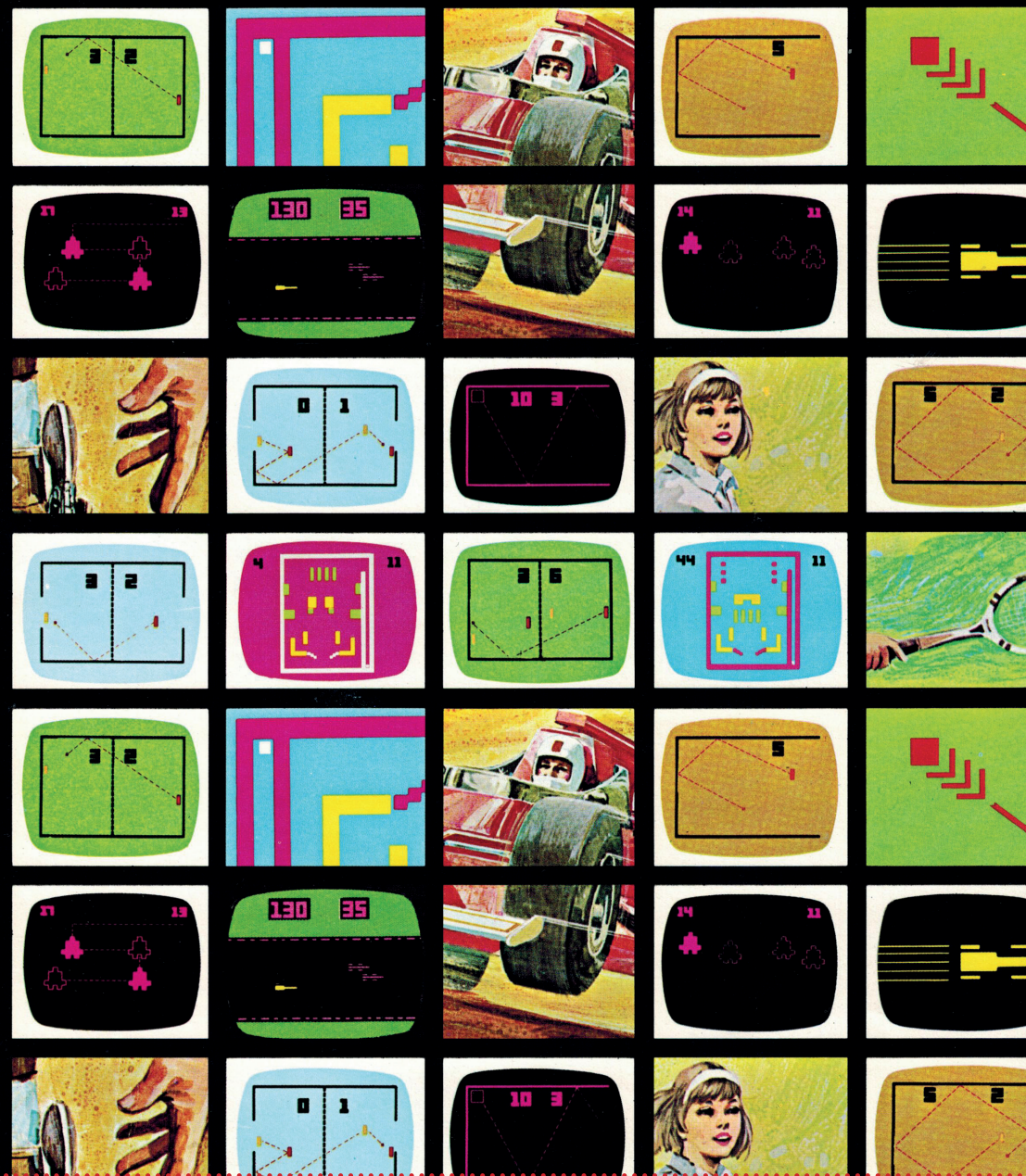
America loved the game! The license holders were happy as well, as they would earn royalties on each unit sold.

Once Coleco had conquered the challenge of making miniaturized copies of big, complex arcade games, they were ready to play with the big boys and to do it with a clear vision, the Coleco vision. It was this vision that drove the company to unparalleled success, but also to the edge of bankruptcy on more than one occasion.



# TELSTAR™ Arcade

## The cartridge video game system





# A NEW VISION



Started in 1979 as a side project, ColecoVision was destined to become Coleco's flagship and ultimate achievement in the video game business from the beginning. The realization of a vision dreamed up by Arnold Greenberg and Eric Bromley, ColecoVision helped Greenberg achieve his ultimate goal: it made his father's company number one once again.

## *Building a Vision*

Like Ultron creating his Vision in the Avengers comic books, Eric Bromley put everything he had into this project. However, due to the high cost of components, particularly RAM - Random Access Memory - the plan had to be brought to a halt: "With Arnold Greenberg, we wanted to make an ar-

cade-quality, cartridge-programmable video game [system]", relates the designer. "But no matter how hard I tried, it was always shot down as too costly".

Indeed, as had always been the case with Coleco, products had to be put on the market at the most accessible retail price point possible. This policy wasn't going to change any time soon, no matter how grand the vision.

"Our team had developed a design around a Texas Instruments video processor and a sound processor from General Instrument - both companies being longtime partners of Coleco, but it was RAM-intensive and therefore way above the costs limits."

It wouldn't be until the arrival of 1981 and a fateful article in a newspaper that the tables would turn for Eric Bromley and his team: "I picked up

a copy of the Wall Street Journal, and inside was an article stating that the cost of RAM had greatly declined", he explains. Once more, this decrease in component prices can be explained by Moore's law, which states that an increase in the power of microprocessors and variable components used in computers is accompanied by a decrease in size and cost every 18 months.

"As soon as I arrived at the office, I retrieved the latest cost analysis and substituted the new pricing. It came very close to the target price point. I remember being very excited, so much in fact that I ran to inform Arnold Greenberg and burst into his office without even asking his secretary! Before he could react, I showed him the new figures. Ten minutes later, we were working on a new project with the working name "ColecoVision". We were supposed to find a really good



and catchy name for it as soon as we could show something to our sales and marketing people.” As we all know, the console was released under the name ColecoVision. The reason for this is simple: they just never came up with anything better.

The price of components was not the only thing to change in 1981. The whole country was going through intense change, beginning with a new president, Ronald Reagan. Not only was his journey from life in a poor town in northern Illinois to the world of acting in Hollywood a perfect example of a rags-to-riches story, but, from his experience working in cinema, he understood better than anyone else the power that entertainment held over people. Furthermore, “Reaganomics”—meaning the economic policies put in place by Reagan’s administration—pushed the government to spend less and reduce taxes for

everyone. All in all, those measures brought inflation down to as low as 4.4%—compared to the 12.5% it had reached during Carter’s last year in office— and unemployment declined from 7.5 to 5.4%, which meant that some of those previously unemployed people might have found their way into Coleco.

Back in Hartford, the former Midway engineer could now get back to work on what he wanted to be the most powerful gaming machine of the period. “The key to ColecoVision was that this was the first home video game [console] that could display and update the entire screen at almost arcade resolution, which, back in 1982, was 256 x 192 pixels, and, at the same time, move objects a r o u n d at a speed that w o u l d test the hand-

eye co-ordination of teenagers”, he told Retro Gamer magazine in their 73rd issue in 2010. “In order to do that, we needed to employ an array of RAM chips, which could create a graphic matrix, which was then sent to the TV. Texas Instruments was very clever - it could move a limited number of foreground objects very rapidly on a second layer over the background without redrawing the entire screen. Both layers required RAM, but, as it was cheaper, we could produce arcade-quality games rendered by a console that could be sold to retailers for under \$130.”

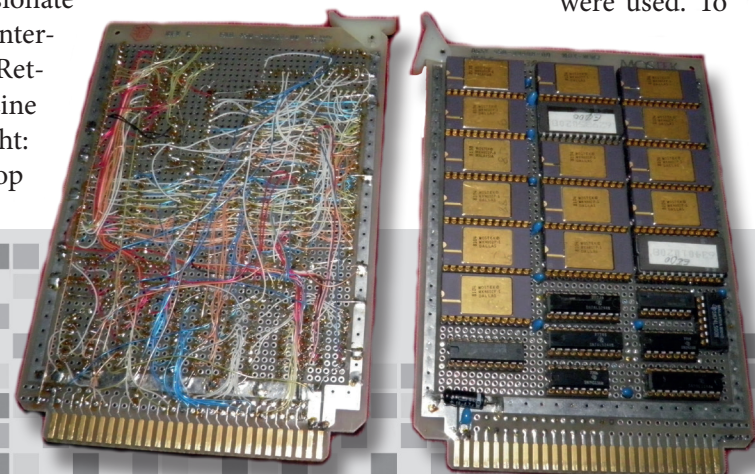
But why was Eric Bromley the right fit for this project? Certainly he was talented and passionate enough. The interview he gave to Retro Gamer magazine is full of insight: “I’m a coin-op

alumnus. Thanks to my previous experience in the arcade business for various companies, I knew almost everyone in the business and had access to the top people in each company.”

### *Becoming the King thanks to Kong*

In order for the console to prosper, it had to have what is nowadays called a killer app. Everyone in the team understood that games and software were essential to the success of the hardware with which they were used. To

Created by Toru Iwatani, Pac-Man was the biggest success in 1980 bringing a new kind of gameplay that would be imitated over and over without the same perfection as the original.





mimic the astonishing commercial accomplishment of the VCS 2600 from Atari, Coleco knew that it required a game as strong as Space Invaders bundled with each system sold.

During the 1980s - and most of the 1990s - arcade games were the reference in terms of progress. Those cabinets used cutting-edge technology to offer deeper and more intense gameplay, but, most of all, increasingly colorful graphics. From Midway to Taito, from Namco to SEGA, the game makers of that era were first and foremost big names in the arcade business, with titles such as Pac-Man, Tempest, Defender, and Asteroids. Coleco knew that it would take at least one piece of software of this caliber to be included in their upcoming console to guarantee its success. "We knew that in order to sell the console, we needed to have a cartridge library - and thus began the licensing frenzy.

I introduced Coleco's head of licensing, Al Khan, to

many of the coin-op game companies", remembers Eric Bromley. "He would spearhead the licensing while my team developed the console that could render them."

But Eric had a precise idea of what he wanted to run on his upcoming console: "Originally, I had two games in mind; if we could get the rights, we could blow everyone out", he recalls. "The first was Zaxxon, a 3D game, which was one of the best earning titles at the time. The other was Turbo, one of the best driving games ever - at least in the 1980s. I would have liked Space Invaders or Pac-Man, but Atari had already gobbled them up. I argued against doing knock-offs, which was the custom of many home game companies at the time. I urged Arnold Greenberg to pay for the licenses." He couldn't have been more right and solved another related issue by doing so: "Besides being the right thing to do, I argued that if we paid for the actual arcade game title, we did not have to describe the game or wait for customer word of

mouth to promote its virtues. Just say Turbo or Zaxxon, and every kid would know what you were talking about and immediately want it."

This is how the decision was made to first have only arcade ports, and, later on, some games based on popular comics such as the Smurfs or on movies like WarGames. No original games were to be produced by the Coleco in-house development team. Only third party developers would do so.

However, instead of opting for an easy choice, Coleco decided to go with

an underdog that wasn't one of the big contenders out there. This small company from Kyoto shared a similar profile with the one from Hartford. However, its DNA was still in games, as it had started as a hanafuda (Japanese game cards) manufacturer and then built plastic toys in the 1960s until joining the video game business through PONG consoles, arcade games, and portable electronic games in the late 1970s and early 1980s. The name of this Japanese company? Nintendo.

When Coleco was working on the ColecoVision prototype in 1981, Nintendo released Donkey Kong in the arcades, recycling a game concept that previously used the charac-

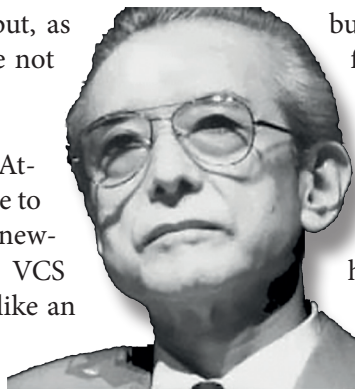


The Color TV Game 6 is Nintendo's first attempt to a video game console and was released in June 1977.



ters of Popeye but had to be changed to avoid copyright infringement. This was a massive hit, and the Japanese company managed to sell more than 60,000 machines. Coleco thought it would be a marvelous game to showcase the power and potential of their newest console, so they decided to go after the rights, but, as it turned out, they were not alone in that chase.

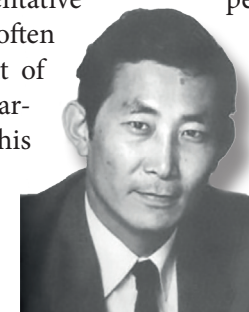
On the American side, Atari also wanted to be able to port the game on their newest console, the Atari VCS 5200, which was more like an upgrade to their aging 2600 than a new console. They went after the Donkey Kong license through Nintendo of America, but, in the end, it didn't work out. In Japan, Taito, a company that shares similar traits with Coleco in that both companies were founded by Russian Jewish immigrants, was the one company looking for exclusive rights as well. They allegedly offered a considerable sum to Nintendo, but this ended up being turned down after three days of intense negotiation.



Coleco didn't want to take the easy route and talk to Nintendo of America, even though its president, Minoru Arakawa, was the son-in-law of Hiroshi Yamauchi, Nintendo's CEO. Instead, they flew directly to Japan and went to the Japanese company's headquarters. It was tough, but it ended up working for the Hartford company, which was deemed "the hungriest company" by Hiroshi Yamauchi himself. Minoru Arakawa agreed with his father-in-law and felt that Coleco was a more established company in the United States than Atari and thus would be more reliable in terms of marketing their product.

On Christmas eve, 1981, Howard Lincoln, one of Nintendo's lawyers, drafted a contract and implemented, at the demand of the Kyoto company, a rather strange clause for the time, which stated that Coleco would be held liable for anything included in the game cartridge—something that would come in handy for Nintendo later on. The

contract was signed on Christmas day by Nintendo of America's CEO, Minoru Arakawa. The signed copy was then sent back to Kyoto for Hiroshi Yamauchi and the Coleco representative to review and sign. It is often said that the late president of Nintendo was extremely charismatic and persuasive. This was proven to be true on February 1st, 1982, when Yamauchi manage to convince Eric Bromley to sign the document without the consent and approval of the company's lawyers. This wouldn't be the last time that Coleco would be subjected to Yamauchi's strong character.



The actual amount of the deal has never been revealed to this day—though some sources talk about a \$200,000 deal— and the only information previ-

ously obtained about it is that, in addition to the sum Nintendo received, they would earn an extra \$1.40 per game cartridge sold as well as \$1.00 per mini-arcade sold. Again, for Coleco, they would be first ones to enjoy a Donkey Kong port on their console that would be an exclusive for the six months to come. Even afterwards, Coleco was the company porting the game to other systems like the Atari VCS 2600 and the Intellivision. In the end, this proved to be a very lucrative deal for both parties, as the bundle sold six million cartridges, resulting in a \$5 million profit for Nintendo! The competition did not suffer much, however, as Atari managed to secure the floppy disc version of the license.





## Kong v. Kong

1982 was starting out quite promisingly for the Hartford company. They had just secured an amazing deal with an outsider that would earn them both millions. What could possibly go wrong?

It was during the summer of 1981, when O. R. Rissman, Tiger Electronics' president, visited Tokyo and discovered Donkey Kong and, what's more, found that he liked it very much. After returning to the US, he sent a letter to Universal Studios in an attempt to obtain the rights for King Kong, so that he could merely copy Donkey Kong. This is what led Loretta Sifuentes to conduct a trademark search to see that everything was in order. And it was. She noticed several uses of the phrase "King Kong" associated with a gorilla picture, but the activity was so small that no actions were taken against the

trespassers. Therefore, in September 1981, Universal Studios quietly granted Tiger Electronics the license they had requested.

As a reminder, Donkey Kong was first introduced in the US in July 1981. By October, Nintendo of America was selling 4,000 arcade units per month!

In January 1982, Sifuentes ran another trademark search and discovered a pending agreement between Nintendo and Coleco over the use of the Donkey Kong license for cartridges and table top games. She asked one of her colleagues of the licensing

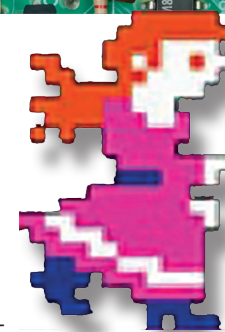
department, Steven Adler, to check



and evaluate the game. After the said check, they realized that there was no infringement to the King Kong license, but not everyone shared this view.

In April 1982, Sid Sheinberg, president of Universal Studios, heard about Donkey Kong and, in turn, asked Robert Hadl, a lawyer in charge of legislative matters at Universal, to go to an arcade and check out this new phenomenon. Hadl went there with his children and decided that the story of a giant ape carrying a woman to the top of a building was too close to King Kong's story, and this is how everything started. However, Sheinberg didn't go to Nintendo first. No, he decided to go after the Hartford company instead.

The president of Universal arranged a meeting with Coleco's counterpart,



Arnold Greenberg, with a precise motive in mind, even though he hid it by invoking a discussion about a potential investment in Coleco Industries. As the two companies had previously discussed such a matter, Arnold had absolutely no reason whatsoever to doubt or suspect anything. It was the Golden Age of video games. Although signs of the famous crash that would occur the year after were nowhere to be seen at the time, media companies acquired video game businesses such as Gulf/Western with SEGA in 1969, or Warner Communications with Atari in 1976. It wasn't surprising, then, that a giant like Universal would want to have a foot in this arena with Coleco. MCA, Universal's parent company, would also join this club following the acquisition of LJN, and this led to the



Howard Lincoln is the lawyer that stood up for Nintendo against Universal feeling that the case of the movie company was not right.

subsequent formation of MCA Video Games in 1985.

On April 27, 1982, however, Arnold Greenberg and his associate, Al Kahn, realized that their Hollywood luncheon would cost them more than the food on their plate: "Close to the end of our meeting," Al Khan remembers, "Sid pulled Arnold on the side and said, 'You know something, we're going to sue you if don't give us some kind of royalty on Donkey Kong, because you're in violation of our copyrights as it relates to King Kong.'"

Needless to say, Coleco's president and CEO was livid. This was not the discussion he had hoped for and most certainly not the one he'd expected. He decided to comply, however, because ColecoVision was getting close to completion, and Donkey Kong, which had been purchased for a hefty price, was to be included with each and every one of the systems. Communications and marketing were also nearly ready to unleash this beast that would bring them a lot of customers

who wanted to enjoy this arcade game at home. Having a restraining order for this product wasn't something they could deal with at this stage of production, especially after the telex they had received from Universal on

April 28— and which had been sent to Nintendo as well—basically stating that they had to destroy all Donkey Kong inventory as per the infringement copyright with King Kong and that Universal would engage legal pursuit if the companies refused to comply in the next 48 hours.

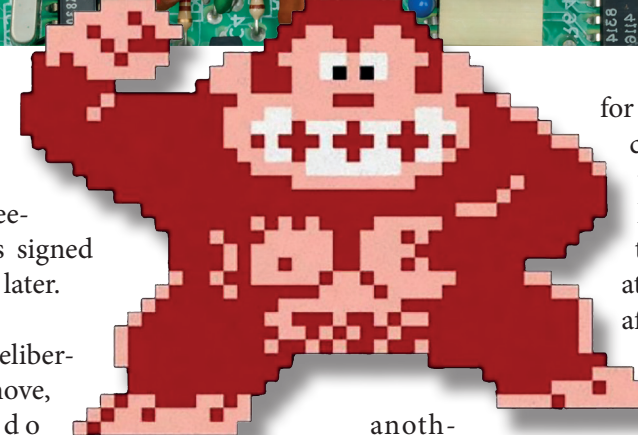
Arnold Greenberg decided what he thought was best for the company at the time and backed down. He didn't and couldn't see any possible positive outcome to this situation if they had to stand up to Universal in court. On May 5, both companies, Coleco and Universal, agreed to a principle that saw the Hartford company paying 3% of the net sales price for any Donkey Kong cartridge as royalties to the Cal-

ifornian one, and the formal agreement was signed one week later.

In a deliberate move, Nintendo was not informed of this deal. As promised to Universal, Arnold Greenberg urged his Nintendo of America counterpart, Minoru Arakawa, to sign the deal as well when they met on May 6 at Universal Studios. Howard Lincoln felt that something was off, though, and asked for more time to think the matter through, a decision that would prove to be the right one in the long run. Furthermore, the clause that Yamauchi had insisted on in the licensing contract was paying off. Indeed, Nintendo couldn't be held responsible

for any of Coleco's losses even though Donkey Kong was their own creation. The day after the meeting, Coleco had yet another meeting with Universal to discuss the possibility of the studios purchasing \$30 million of Coleco debentures. (This purchase would take place in the future, following a historic turn of events.)

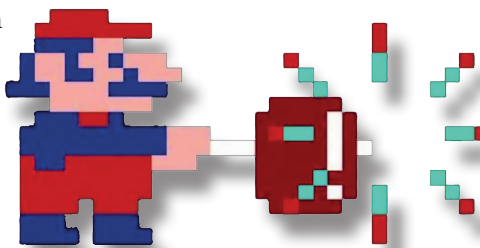
Indeed, in response to Nintendo's refusal to comply with Universal Studios' demands, Sid Sheinberg's company filed suit against the Japanese company on June 29, 1982, claiming that Universal owned all the rights to King Kong. That same day, Universal announced its licensing agreement





with Coleco, which would eventually lead to games adapted from some of the studio's movies. To make the matter worse, Universal contacted, one by one, all of Nintendo's licensees and threatened them with litigation if they did not abandon their relationship with Nintendo. All complied, with the exception of Milton Bradley, which had a Donkey Kong board game but was never taken to court on the matter.

In January 1983, the case was presented to the New York courtroom of U.S. District Court Judge Robert W. Sweet. After thorough research, Lincoln had discovered that Universal and MCA had previously argued in court that King Kong was public domain and thus didn't belong to anyone or any company. This discovery infuriated the judge. Although they appealed each and every decision, Universal Studios couldn't argue that Nintendo's claim was wrong. The Japanese



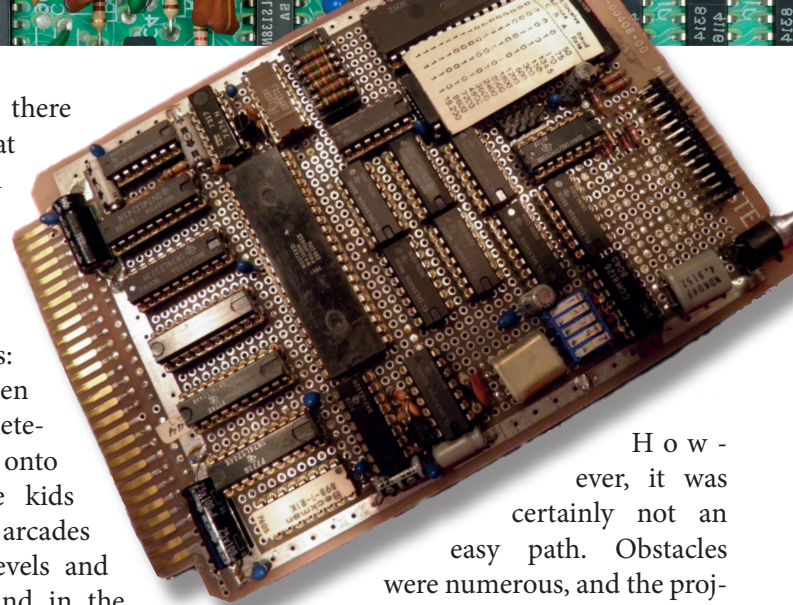
company was awarded \$1.8 million when the ordeal was over in July 1985. Obviously, the companies involved realized that this was their chance to get what they had paid back. Coleco filed suit against MCA Universal to retrieve royalties paid, which they did in the form of stock bought by the Californian company. With that being settled, the company was able to return work and put the finishing touches on its upcoming system.

### *Polishing the Vision*

Eric Bromley and his team continued to work on the console so it would be ready for the summer of 1982, as expected. There was one question that did not have an answer yet, however:

how would they manage to fit a game that was stored on a huge printed circuit board onto regular cartridges that could be used for ColecoVision? It

turned out that there was one trick that would serve both the console manufacturer as well as the arcade operators: "Because we often could not completely fit most games onto a cartridge, the kids went back to the arcades to see all the levels and features not found in the home version. Thus, we created an amazing commercial symbiosis: because the kids already knew what the game was, home sales didn't ramp up; they exploded. Thanks to that explosion, the media covered the product and prolonged the revenue stream at the arcade venues. Both coin-op operators and manufacturers benefited from that exposure."



How-  
ever, it was certainly not an easy path. Obstacles were numerous, and the project was nearly cancelled at a very late date: "Coleco's sales and marketing was about to drop the product. I had to privately talk Arnold Greenberg into going forward. My argument was that the Atari VCS 2600 and the Mattel Intellivision could not do either Zaxxon or Turbo in any way close to the ColecoVision, which had twice the horizontal resolution of the



Atari VCS and half again that of the Intellivision. Atari was using what was essentially a chip that directly wrote the screen on the fly; thus, any complex graphic would take too long to be displayed. Add to that speed limitations that made it impossible to render graphically interesting objects fast enough to create hand-eye co-ordination difficulties. It just could not be accomplished with Atari VCS technology. The Intellivision had even more issues. It used General Instrument's five-chip set with several chips used to write different sectors of the screen. There were extensive restrictions on moving from one sector to another, creating problems moving objects diagonally over the boundaries."

It was not only due to some clever retro-engineering work that Eric Bromley was aware of these issues faced by the competition. Back in the Telstar days, General Instrument and Coleco had been partners in the development of a more advanced chip for a new generation of video games. Thus, Coleco's designer knew what was going on and had even helped design some of the processor's arrangement: "I helped develop the chipset and

its operating system. After spending almost two years working with General Instrument, trying to fix a myriad of problems, I suggested that Coleco walk away from it. We did, and, much to my amusement, Mattel bought it. I was wild with glee. We knew that we could be vastly better than our competitors, and they couldn't fight back."

The talented engineer proved that he knew exactly what he was doing. He preferred to take a few steps back and see the big picture rather than diving right in with bad components. While Mattel was going through with their Intellivision, the ARD, like an elite team, was building a next generation console that would blow everyone away.

In order to achieve that goal, the team decided to use the Zilog Z80 at 3.58 MHz as the central processor unit, or CPU. This chip was one of the most popular of its era and was used in many other video games devices, such as the Neo Geo from Osaka's based company SNK, the Master System and the Genesis for SEGA, and even in computers like the ZX80 from Sinclair Research and the CPC from

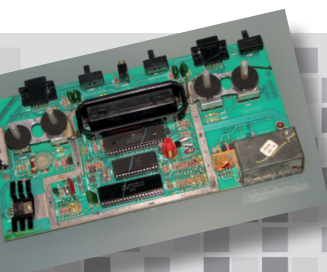
Amstrad. This chip enabled Coleco to be more than three times powerful than the competition. Indeed, this was in comparison to the Atari 2600 - as the 5200 would be released only in November 1982 - which used a MOS 6507 chip at 1.19 MHz, and the Intellivision, which employed the use of a GI CP 1610 at 894.886 kHz - not even 1 MHz!

Power was not the only advantage the ColecoVision had over the competition. The smart team of engineers and designers decided to use a dedicated chip for the graphics, which was a very sound choice and allowed the console to display up to 32 sprites at the same time and up to 16 colors, an impressive feat for the time. For example, the Atari 2600 used a second chip; however, it was not dedicated to graphics, as it was used for audio as well. The developers were thus limited in their move.

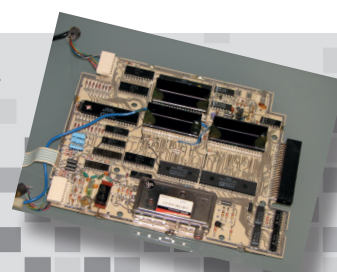
Finally, as three years separated the last video game console release - the Intellivision from Mattel - from the release of ColecoVision, the Hartford-based company could enjoy a final advantage over the competition: the internal size of the ROM cartridges. Indeed, if, at the time of the console's release, the size was only 8 kB, it quickly grew to 32 kB, enabling the developers to create much more complex and in-depth games that had never been seen before.

With all of these factors working in Coleco's favor, the result was outstanding and allowed gamers over the world to enjoy games that were colorful, like the Smurfs, which looked almost like the comic book, or arcade port-perfect, like

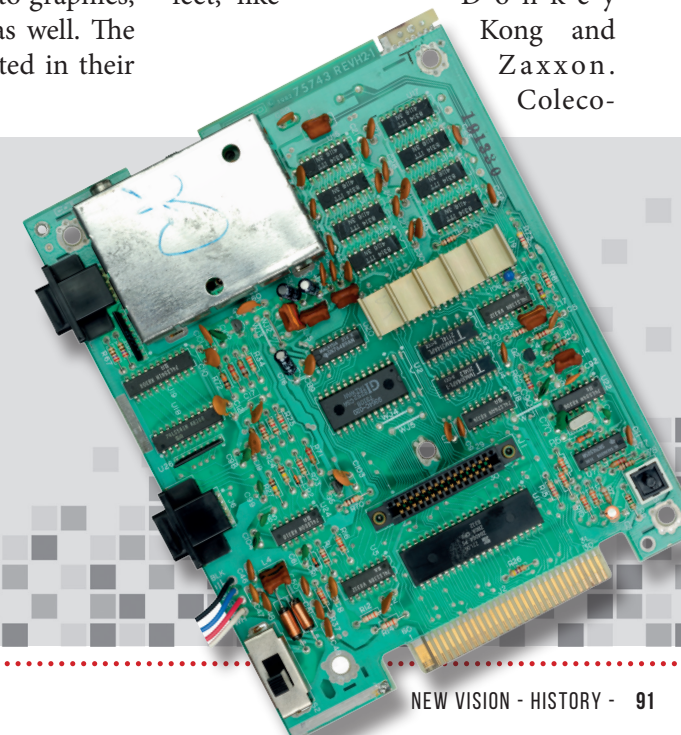
Donkey Kong and Zaxxon. Coleco-



Inside the competition: Atari 2600 motherboard on the left and Mattel Intellivision on the right.



Retail ColecoVision motherboard.





Vision had even more features that left the competition in the dust.

### ***Analysis, descriptions and diagrams: making games at Coleco***

Even though the licenses were acquired and the deal signed, the games still needed to be made. So how did a team, as skilled as it was, make the leap from arcade machine to cartridge?

Back in 1982, most of the development studios had rather small teams where it wasn't uncommon to have a game made by only one person who was a programmer first but had learned to also be a graphic designer, a game designer, and sometimes even a composer, when music and sounds were needed.

In that sense, Coleco had another grand vision and was one of the first—if not the first—video game maker to employ different people for different roles, something that is extremely common in the modern video game industry. As Lawrence Schick, one of the lead game designers, remembers, “This approach of designer-artist-composer-programmer(s) enabled

team design and quick development.” Frank Lam, an artist on many ColecoVision games adds, “Usually there would be a Game Designer, a programmer, and an artist on each product.”

The designers were not the only ones making the rules of the game, even when most of the games were actually arcade ports. Coleco had a specific title—Principal Writer and Editor—assigned to a person who would study the game and create documents for the whole team. First occupied by Michelle van Schouwen, this is how she describes her role: “In Advanced Research and Development, our whole purpose was to think up, design, engineer, and then take the first steps towards producing games.”

Those documents were created via a process you wouldn't find in your typical boring office, as Michelle remembers: “We would work directly with the arcade game, and so part of the job was to play the games.” This fun was always just a part of the job that was still a serious business: “Along with the game designers, we would play the games and really record them down to

every detail, so we really had to understand how the games worked and exactly what was happening. So it takes a little bit of the fun out, because it really makes it a science.”

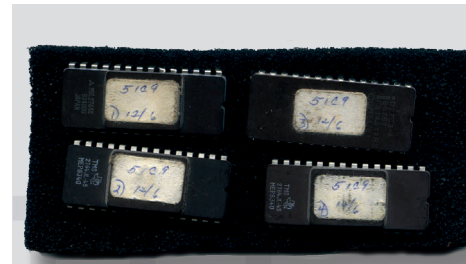
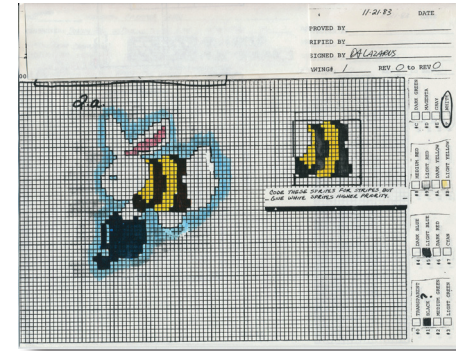
Then the game designers came into play. As Michael Price describes, “[As a designer] I had to come up with the way the rules would work.” Lawrence Schick adds, “I would create a design document that described in details how the game was controlled, what happened on every level, how the AI routine worked, and the timing of how everything moved, down to the millisecond.”

Once this first part was achieved, the artists—all assigned the title of Elec-

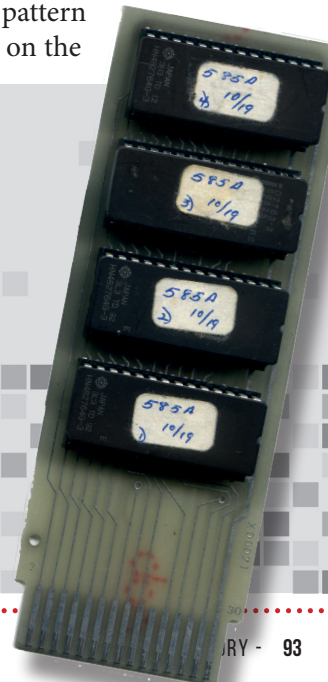
tronic Graphics Artist—could jump in and create the visual aspects of the game. Frank Lam was part of this team:

“As an Electronic Graphics Artist, my role was to design and create sprites (8 x 8 pixel movable tiles), and animations and backgrounds (8 x 8 pixel static tiles).” Debra Lazarus, another artist at the com-

pany, adds the following: “An artist would begin by making drawings of images needed to portray the story elements in the game. Then those drawings were adapted to pixels using ARD custom graph paper that correlated to pixels on a screen (256 x 192 pixels). The pixel graphics were composed from pattern blocks of pixels on the



◀ ColecoVision eprom or the chips containing the games ▶



graph paper (32 x 24 pattern blocks on a pattern plane); each pattern block was 8 by 8 pixels (64 pixels in a square) and had a maximum allowance of two colors (or one color and transparent). We would color the pixel graphics with watercolor markers on the graph paper, indicating the color on the provided checklist. There were 16 colors (or 15 colors and transparent).”

It is true that the tools were very primitive back then. Lawrence remembers that “Analysis, descriptions, and diagrams that were made—except for the diagrams—on a big dedicated word processor, before we had computers to work on.” The artists were in the same boat, as Debra recalls, “We used paper, pencils, watercolor markers, ARD custom graph paper, a photo copy machine, VHS camcorder, VHS tape player, and a Polaroid camera for easy screen shots. We also had books for reference.”

Once this entire fastidious process was complete, the game was ready to be programmed and packaged into a tiny cartridge. One of the packagers that managed to find the breakthrough technology that allowed Coleco to shrink the big arcade motherboards to fit the ColecoVision cartridges was Charles R. Lanning, whose son, Lorne Lanning, went on to create one of the most successful video game studios of its time, Oddworld Inhabitants and the Oddworld series, which started on PlayStation.

Finally, an artwork had to be made for the game box in order to attract the customers with flashy colors and bold design. Contrary to some developers and publishers, Coleco had this process done in-house. Nancy Hansard was a Package Designer from 1981 to 1986 and designed most of ColecoVi-



sion boxes such as Venture, Blackjack or Burger Time. For the latter, Nancy used to go to some diners in Connecticut to take some pictures for inspiration.

### *Evolution of a vision*

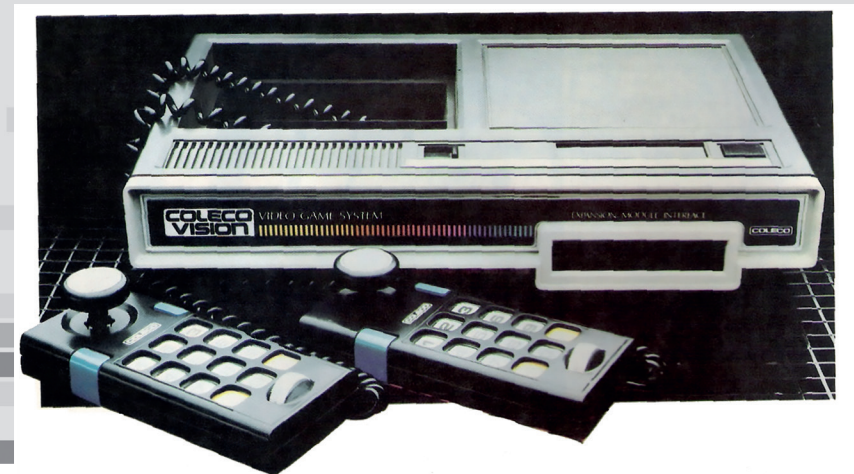
Like every video game system, or creation, in a more general sense, the evolution of the idea and its maturation generally produce interesting prototypes that give a good indication as to the path the designer chose to follow. The ColecoVision is no exception, and some uncovered documents allow us now to shed a new light on and compare the different stages of the evolution of the machine to its final iteration.

In the very first prototype, the logo was different from the final one: it was on two lines instead of one and written in white on a black background

instead of the rainbow colors that were ultimately chosen. Also, the on and off switch was placed horizontally. It remained this way until the development of the third prototype, which was closer to the console released in August 1982.

The controller got its fair share of modifications throughout the design and production processes. Even though it stayed close to the released version, the first iteration had blue side buttons, and, more importantly, a thumb wheel called the “Speed Roller” between the numeric pad and the joystick that did not make it to the final version, although it was present in a later version of the prototype. The actual use of this part remains a mystery today, as these controllers have not been seen in the wild for over 10 years.

On the marketing side of things, not everything was set in stone, and an





unusual change was made to the console box. Indeed, the very first few shots showed Coleco's CEO Arnold Greenberg with a purple/violet box. Furthermore, an avid collector managed to get his hands on one of those and noticed a few changes: in addition to the different box color already mentioned, the collector's version also came with the controllers with the speed roller that was removed afterwards; the yellow font describing the key points of the console that was later switched to a black and sober font for the final grey background; and the bottom right Donkey Kong indication that was replaced by the flashy yellow splash, all the better to catch the eye of the customer. One of those boxes,



allegedly owned by former director of product development Dexter Liu, recently went for auctions on eBay and sold for \$1,878.

Once those final decisions were made, the console was almost ready to hit the shelves.

### Sharing the Vision

After months of negotiating with the boss, years of hard work, the ColecoVision was ready to be released into the world. The very first time the console was shown to the public was during the Consumer Electronics Show (CES) in Las Vegas in January 1982. Even then, the system itself was not present. "During the event, I went to Coleco's booth, and they told me that they wanted to show me their upcoming console. I was very excited, and they brought me in a small room and opened a binder with pictures of the console! I was a bit disappointed but still happy to discover something new", remembers Al Nielsen, former Director of Marketing at SEGA of

America and assistant buyer for the video games division at JC Penney during the ColecoVision's years, thus putting him at the forefront of the machine's success.

The very first announcement for the general public however, occurred on June 1, 1982, a mere two months before the launch of the console. This communication tactic feels strange nowadays, when consoles are announced an immense two years before their actual release.

In August 1982, it was finally time. After almost three years of work, the ColecoVision finally hit the shelves, even though the precise launch date remains unknown. The final box was grey, bearing the console in its center and the logo above. In the top left corners were some arcade cabinets from which screenshots were pulled, thus making it clear to the customer that

"The Arcade Quality Video Game System" was the ColecoVision and nothing else. In the top left corner, there was a sun-like yellow shape stating what every child of the early 1980s wanted to read: "Bonus! Donkey Kong cartridge included". A game was already inside, meaning that the system came not only with the cutting-edge technology that was inherently part of it, or the two controllers, but with an actual playable game. What was more, if other kids had an Atari VCS or a Mattel Intellivision, they couldn't play Donkey Kong, as Coleco had a six-month exclusivity agreement for this specific title, and this strategy worked beautifully. On top of that, Coleco had prepared a library of 12 games for the launch, each one being more impressive than the other. Contrary to popular belief, the ColecoVision didn't have only arcade ports: one of the launch titles was The Smurfs: Rescue in Gargamel Castle, from a Belgian comic book



◀ Prototype vs. reality ▶



written and illustrated by Peyo. The Smurfs was also the very first game for this popular license.

The retail prices of \$175 for the system and \$35 for the games were carefully crafted and low enough to allow Arnold Greenberg to validate the product. Combined with the excellent library that the design team had crafted, the 550,000 consoles manufactured were all shipped just in time for Christmas 1982.

As no one had expected Coleco would ever come back after the near-fiasco of the Telstar product line, certainly no one had expected the Hartford company to do as well as it did. By the end of the year, it had nearly tripled its sales, going from \$178 million in 1981 to \$510 million in 1982, with a boost of 420% in net income, reaching \$40 million. The competition was stunned, and the dichotomy of Atari and Mattel was turned upside down. In the

commercials of that era, Atari mocked Mattel for the lack of hit games on its Intellivision, and Mattel mocked Atari for the poor quality of its graphics compared to the arcade titles. And there, in the midst of this gaming war, arrived Coleco with its ColecoVision that had both hit games and high quality graphics. The ColecoVision brought video games to a new graphical era, abandoning the abstract shapes and forms of the competition to deliver precise and colorful graphics. This was almost a new generation on its own, given the fact that the gap between the previous systems was so huge.

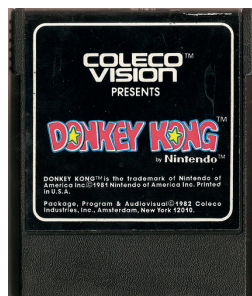
Though Mattel didn't significantly alter its strategy and focused on its console, Atari was actually on the verge of releasing a new system. The Atari 5200—marking the nomenclature change at Atari, the VCS officially becoming the Atari 2600—was released in November 1982. It was basically a console version of the home computer Atari 400/800. Everything was improved. For example, Zaxxon ran

much more smoothly on the Atari 5200 than on the ColecoVision. However, the Silicon Valley company didn't have the game library nor the contact list for good arcade licenses as Coleco did, resulting in the sale of a mere one million units of its system, whereas its new competitor sold six times more.

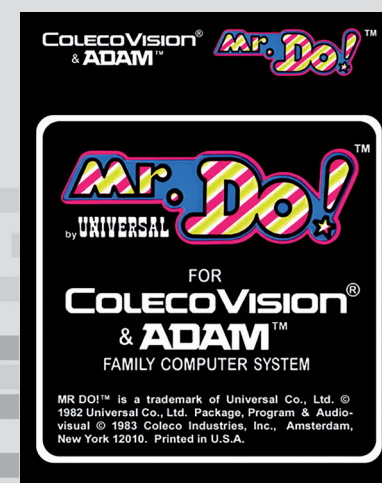
One interesting fact is that Coleco didn't take care of the marketing, distribution, or manufacturing of its console outside of North America. They struck a deal with CBS, but, more precisely, its dedicated division, CBS Electronics. In those territories that included Europe and Australia, among others, this company also published ColecoVision, Intellivision, and Atari VCS games on Coleco's behalf. Furthermore, in the French commercial aired in 1983, the console was presented as the CBS Electronics in lieu of the ColecoVision. However, the ColecoVision was never released

in Japan. CBS' lack of knowledge of this part of the world where culture is so different and Coleco's refusal to partner up with Nintendo put a halt to the distribution of the console in the land of the rising sun. Finally, because of the video game crash of 1983, CBS abruptly pulled the plug on its video games division.

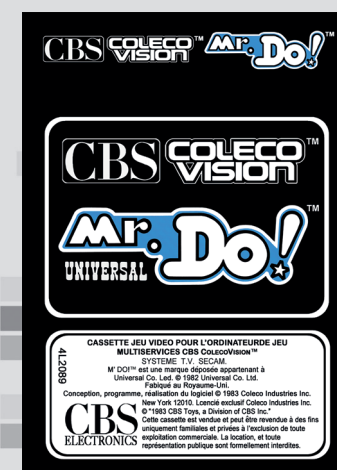
At the beginning of the ColecoVision's commercial life, all games were developed exclusively by Coleco's ARD team. However, in 1983, the executives realized that this way of making games was extremely expensive, especially since Coleco was a third party publisher and developer for the competition. That's right: when the exclusivity for Donkey Kong expired, the team at Coleco chose to develop the port for the Atari 2600 and the Intellivision themselves. This is why they decided to share their vision and to allow other developers to make or port their



Michael Thomasson, aged 12, got his ColecoVision for Christmas in 1982 and got to play Donkey Kong for hours!



International distribution was done by CBS Electronics.





own game to the ColecoVision.

The very first developer to port his game to the console was Mike Livesay, the man behind Miner 2049er, which was originally released for the Atari 2600, but for which Micro Fun—the company Mike worked for at the time—got a license to port on the Apple II. The way he achieved it was by reverse engineering the system, as Coleco didn't want to provide him with a development kit. It was tedious and unstable, but it got the job done. Additionally, the ColecoVision was so much more powerful than the Apple II that Mike could implement a new level he called “the impossible to get to 11th level”. This was an instant hit and performed even better than the Apple II version, granting the 24-year old a comfortable salary of \$15,000 per month for the next few months.

Among the notable studios that developed for the ColecoVision, one finds Nice Ideas, a French studio from the south of the country, though not in the city of Nice as the name suggests,



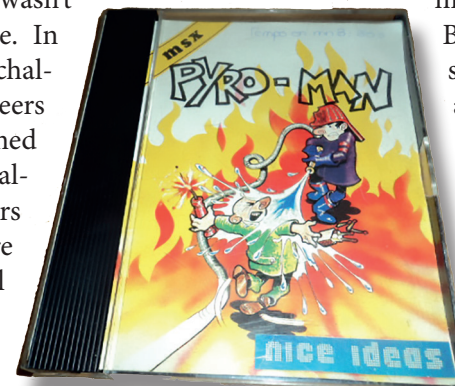
but in the activity park of Valbonne Sophia Antipolis. Founded in 1983 by Mattel Electronics, with Tim Scanlan as the director, the company's goal was to develop games that would appeal to the European audience and touch their sensibility. Of course, the studio was established to develop games on the Intellivision, but when Mattel closed its electronics division in 1984, Nice Ideas ported a few arcade games for the ColecoVision, including BurgerTime and Bump 'N' Jump. They also created one of the few original and exclusive games available on the console, Illusions.

### *The true reason behind the twelve second delay*

All ColecoVision cartridges, as well as many of the third party titles, incorporated a patience-testing twelve second delay before the game select screen showed up. One story commonly cited is the following: before the ColecoVision reached the marketplace, Coleco invested heavily in advertising for the system, building up significant demand. The problem was software support. Few programmers knew the ColecoVision's quirky assembly lan-

guage, and there wasn't time to train more. In response to this challenge, the engineers at Coleco designed an emulator that allowed programmers to code in a far more common and well known language, Pascal. Coleco then hired programmers familiar with Pascal to design software for the ColecoVision, and thus were able to provide software to meet the demand. The only problem with the scheme was the twelve second delay the emulator caused while starting up.

As good a story as this makes, it's incorrect. The real reason behind the twelve second delay was a loop in the ColecoVision BIOS—the delay was purely intentional. The way compa-



nies such as Parker Brothers, Activision, and Micro Fun avoided the delay was to simply bypass the ColecoVision BIOS.

### *Expanding the vision*

The ColecoVision was remarkable for many reasons, and one of them was its extensive expansion capabilities. As one can easily imagine, this is not something that came in late during the console's development. The whole concept and system was built around this idea of expansion.

This is why, even in early sketches, the front side expansion port was already present. “There were two reasons why the ColecoVision expansion slot was

The blue screen of patience.

TO SELECT GAME OPTION,  
PRESS BUTTON ON KEYPAD.

1 = SKILL 1/ONE PLAYER  
2 = SKILL 2/ONE PLAYER  
3 = SKILL 3/ONE PLAYER  
4 = SKILL 4/ONE PLAYER

5 = SKILL 1/TWO PLAYERS  
6 = SKILL 2/TWO PLAYERS  
7 = SKILL 3/TWO PLAYERS  
8 = SKILL 4/TWO PLAYERS

carefully placed in the front. It was the key to our differentiation from other manufacturer's products. When we showed the 'beauty shot' in our ads, we did not need a second picture to show it. It was always there; it promised to take you to exciting, unknown realms. That alone, sold a lot of ColecoVision consoles. Secondly, it was a promise that everyone could soon have a real computer just by adding a module to the video game console."

The very first Expansion Module to be thought of by Coleco was an adapter to play Atari 2600 games on the ColecoVision! As crazy as it may seem, this device was not only released but also led to a clone console of its own, the Coleco Gemini, which had the same goal as the expansion module. As Al Nielsen, former director of marketing at SEGA of America and then buyer for JC Penney, recalls, "From a marketing standpoint it was genius! The kids that would ask a ColecoVision from their parents could now have an answer to the ever coming question 'What will we do with your old Atari cartridges if we get it?,' as the module would do exactly that.

First presented at the Atlanta CES 1982 during the summer, the sales team in charge of presenting the device to potential buyers did not expect that they would be challenged on the veracity of their installation. As Al Nielsen, who was once again present, remembers: "When I got to the Coleco booth, they told me they wanted to show me something else. They guided me to a small room with a TV and a ColecoVision with a module playing an Atari 2600 game. But I was skeptical, so I asked if the actual device was working as it should, and of course I was told that it was. So I reached out to the expansion module and removed the cartridge, and the game was still going on like nothing happened!"

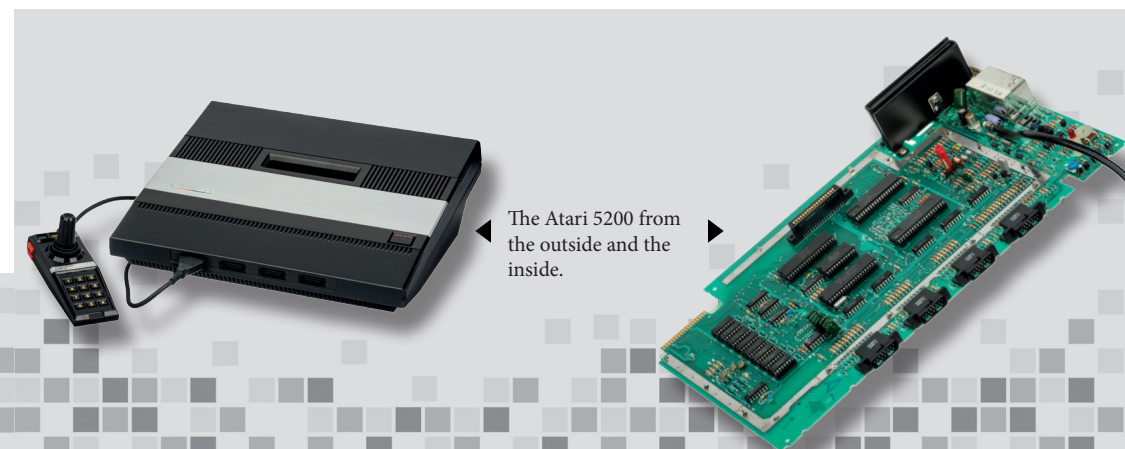
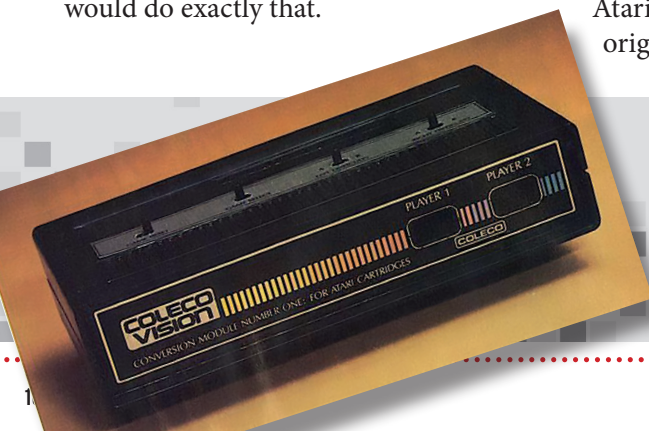
This first module was released during the fall of 1982 at the exact same time when Atari released their new console, the 5200. Even then, it couldn't compete with the ColecoVision, as it was too expensive, and there were no new and interesting games especially designed for the new machine. Atari made a crucial mistake— (and it wouldn't be its last, given that the Atari 7800, another update of its original console, would be re-

leased in 1986)— and didn't expect such a hit from a toy manufacturer. Of course, Warner Communications got angry when they saw the Expansion Module #1 and sued Coleco in December 1982, seeking damages of more than \$350 million. The Hartford company chose to file a \$500 million counterclaim, charging violations of antitrust law. Coleco said it had not infringed any valid patent and that the Atari suit was without merit. However, in March 1983, Coleco chose to settle outside of court and became a licensee of Atari's patents.

As a matter of fact, the Expansion Module #1 gave birth to a pure and

simple clone of Atari's first home console. Called the Coleco Gemini—different from the Telstar Gemini released in 1978, (see chapter 4)—and released alongside two controllers, the console was working with the entire library of the Atari 2600. The gamepad was very different from those that one used with Atari consoles. Nicknamed "Dual Command", it featured an 8-way joystick, 270-degree paddle, and an action button, all on the same controller. This was not the only improvement over the original. The resolution was lightly increased, allowing the game to be displayed with 160 x 200 pixels over the 160 x 192 of the VCS.

In a funny turn of events, for the



The Atari 5200 from the outside and the inside.



Gemini, Coleco would team up once more with CBS Electronics, though indirectly this time. CBS Electronics' parent company, CBS, had introduced Columbia House through its Columbia Records division and created the Columbia Record Club, a mail-order music club. During the video game heyday, CBS wanted to diversify this club formula and decided to offer video games as well. This resulted in a deal between them and Coleco and a rebranded Gemini bearing the Columbia Home Arcade name. However, between the unexpected bad results, the video game crash, and bad publicity because of controversial practices, this console version was discontinued. Columbia House, after changing hands several times with owners like RCA and Sony, filed for bankruptcy in August 2015.

Available also during the launch year of the system was the Expansion Module #2, which was a steering wheel and



pedal to go along with Turbo, a racing title from SEGA that was already a success in the arcade. Even if the gas pedal was a mere on/off switch—the technology didn't allow for any analog controls at a decent price—the steering wheel allowed for more precision and control. Moreover, branded as an Expansion Module, the device was actually to be plugged into the controller port. Finally, more games were compatible with the steering wheel and the pedal, such as Destructor, Bump 'n' Jump, and Dukes of Hazzard. The ColecoVision also got its fair share of accessories, and the two most important were the Roller Controller and the Super Action Controller Set. The former was nothing more than a trackball similar to one found in an arcade for use with a game such as Centipede. In an amusing coincidence, the controller was bundled with a clone

of an Atari game entitled Slither. The trackball worked well and was praised by gamers for its precision, but it had not been designed for small living rooms. Indeed, the controller itself included another pair of ColecoVision controllers, for a grand total of 28 buttons and a size nearly as big as the console itself! One other thing that is worth mentioning with regards to the device is that it wasn't to be plugged into the expansion slot on the front or in the controller port. Instead, it was to be connected in the power supply port on the back of the console. The plug allowed the user to then plug in the actual power supply.

The Super Action Controller was a

milestone in many ways. Its design, which included a hand guard, was excellent, and many players found appeal in the fact that it resembled an actual phaser from the Star Trek series. It also came bearing an actual joystick, just like the ones from the arcade, and what better device for a system that claims to bring arcade quality video games into the home? Finally, this was the only controller that brought the speed roller to fruition when it was abandoned for the original controllers. However, in terms of precision, many players were disappointed, as the controller was actually awkward to play with. Many recall the exhaustion of having to hold the controller vertically with one hand for the action buttons, while having to use the







the-art console, and the team at Coleco could make it better. It was unfortunate, then, that the last device to make use of it would cause the ruin of not only the entire video game division, but also the company as a whole.

other hand to control the joystick. As for the original controllers, they only came by the pair, which was helpful in preventing jealousy among players – two brothers, for example.

The expansion strategy developed by Coleco for the ColecoVision was an inspired business idea. The users would need the main item, the ColecoVision, which was already a state-of-





# ON THE EDGE



After the immense success of ColecoVision, the Hartford company had enough money to try its hand at some new projects. More and more homes were investing in computers, which were getting smaller and smaller. There was definitely space for a new player with a fresh perspective. However, before delving into this venture that would cause more harm to the company, Coleco would produce a couple of devices that looked quite familiar.

## *The Inventor, the Bears, and the Cassette Tape Player*

Shortly before halting production on ColecoVision, Coleco was presented with one last opportunity to collaborate with their longtime partner, Ralph

H. Baer. The inventor noticed that one of the flaws of the early video game consoles was their poor sound quality, which could prove to be annoying over long game-playing sessions. As he put it in his autobiography, *Videogames: In the Beginning*: “Back in 1977, I had worked on the idea of using ordinary audio tape players in conjunction with video games—not a particularly high-tech idea but a timely one. The basic thought was that the video games of that era had no decent sound capabilities. They beeped and pinged, played some monotone music and made some explosive noises, but not much else.”

Naturally, he had a solution for that: “I proposed using prerecorded audio, played back under the control of the video game console, to bring some real music action sounds and speech into the games.”

After working on a prototype (which was the easy part, according to the inventor), Baer submitted the patent application in July 1978; it was issued four years later. It was then time to go and find someone to whom he could sell this new technology. In April 1980, the Odyssey inventor approached to the original manufacturer of his console, Magnavox, and described his ideas about the use of audio tape in a video game context. Unfortunately, it was a non-starter. It was then that he realized that there was a potential, yet untapped market for video games that could use his idea in conjunction with an already established base of certain preexisting consoles: “Another two years passed before I finally came up with the idea for a really attractive video game demonstration system that used an audio tape player.

It had occurred to me that nobody



had done a video game suitable for three-to-five-year olds, preschoolers. Also, there were millions of Atari Video Computer Systems (VCS) in people's homes, with many of them already stowed away in assorted closets. Maybe they could be revived for use by toddlers and early-schoolers?"

The stage was set, and the outlines of the project were becoming clearer and clearer. In terms of finding a prospective company that would be interested in backing his idea, he knew it would be better to have some kind of working prototype to show them rather than simply having a vague idea. Therefore, Ralph built one of the very first emulators to help him demonstrate his project to various companies: "Working in my own lab at home, I rebuilt its innards and interfaced the tape player with an Apple IIe computer. The idea was to have the Apple emulate an Atari VCS with the tape player

plugged into one of the hand controller connectors. The computer's job was to turn the tape player on and off under program-control."

After creating a small program, writing a little story, and narrating that script using his best grandfatherly voice, Ralph Baer was ready to show it to a company he had already helped—Coleco: "As soon as I had this demo working flawlessly, I packed up my Apple, its monitor and floppy disk drive, and the modified Tiger tape player and took it all to Coleco on August 12th, 1982. Eric Bromley, Arnold and Leonard Greenberg, and several other people came into the room where I had set up my demo."

As a reminder, at this point in time, ColecoVision had only recently been put on the market, and its success was not yet guaranteed. That was why Ralph Baer

told his hosts that it was for a different console: "I emphasized that the major object of the exercise was to tap into the Atari VCS market."

He then quickly saw that he was talking to the right businesspeople: "As the game began, [...] I could see Arnold and several others exchange nods and eye contact. I knew right then that I had rung some bells. There must have been something similar to my demo going at Coleco, which allowed them to understand my system without the need for a sales pitch. I instantly had a handshake agreement. Coleco took a license to an ancient [...] audio control patent of mine that had been issued back in 1975 and also to my novel methods of controlling an audio tape game, specifically an Atari VCS. In fact, they were shooting for product release in time for [the] next year's July 1983 Consumer Electronic Show

(CES)."

But why would Coleco be interested in an Atari VCS-only accessory other than for its existing user base? "What I didn't know at the time," recounts Ralph Baer, "was that Coleco was working on Gemini, a knock-off of the Atari VCS, also slated for CES introduction. They saw my Dr. Seuss demo system, which would later become known as Kid-Vid, as a natural complement to their Gemini machine. It was something Atari could not offer. Bingo!"

First marketed as the Gemini Sound I Voice Module, its target market and what it was supposed to work with were not clear enough. A name change was necessary. Kid-Vid was the best way to go. At a glance, it was clear who the target audience was and what





it was used for. However, despite this step forward, Coleco would soon take two steps back.

The Kid-Vid was on track, targeting pre-schoolers and early-schoolers. In order to appeal to them in the

most effective way, Coleco, as it had previously done for many toys over the years, spent millions of dollars to grab up some specific licenses. For their Atari VCS accessory, with their target audience in mind, they went after the Berenstain Bears. Created by Jan and Stan Berenstain in the late 1950s, the characters had previously appeared in many successful books.

The other license Coleco went after was the Smurfs. After the incredible success of the first Smurf game on ColecoVision as well as the cartoon series that aired around that time, it was

obvious that the small blue creatures could not only make kids stop and listen but also teach them a thing or two. The Hartford company also bought licenses for the Wizard of Oz as well as all the Dr. Seuss characters

(Cat in the Hat, Myrtle the Turtle, Sam I Am & the Grinch). Unfortunately, they would be never used.

The device was first shown to the public during the annual International Toy Fair in February 1983 in New York City. According to the inventor, "It received some good notices in the trade press during the first two or three days of Toy Fair."

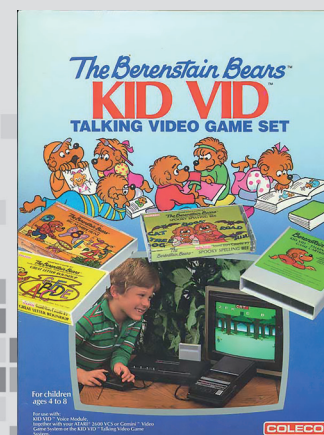
However, the Atari VCS accessory seemed destined to be short-lived for two reasons: "Unfortunately, instead of a cute little kiddy tape player like

the white Tiger machine that I had modified for my Dr. Seuss demo, Coleco, in its corporate wisdom, chose to use a standard black "shoe-box" tape recorder for Kid-Vid. That did nothing for its appearance. Equally unfortunate for Kid-Vid was its introduction at the same CES show as ADAM, Coleco's abortive venture into the home-computer business. [...] Because of ADAM, there was precious little promotion money available to push Kid-Vid sales."

Despite this challenge, Ralph Baer at least expected to see his invention on a well-lit spot during the show. Sadly, this was not to be the case: "[...] I was disappointed to find them [Kid-Vid units] hooked up exclusively to Coleco's Gemini console, their knock-off of the VCS. There was nary a sign anywhere that even mentioned the fact that Kid-Vid could plug into any one of the millions of Atari VCS units out

there, which was the whole idea to begin with. It was the story of Magnavox Odyssey playing only on Magnavox TV sets all over again! There was no spotlight on them. Half a dozen Kid-Vid units rested forlornly on a dark display table, black on black. They just sat there, poorly lit, misleading signs and all. I got a real bad feeling right then and there that something was clearly wrong."

The inventor's intuition was right. After the release of the Kid-Vid Voice Module later in 1983, only two games were ever released: Smurfs Save the Day, which came with the device and included one cartridge and three cassette tapes; and The Berenstain Bears, which was sold separately and included the game and another three tapes. This would be the last released product that Coleco and Ralph Baer would collaborate on.



## On the Verge of a Revolution

Back in 1982, when Mr. Baer demoed the device that would become the Kid-Vid, he also brought with him a few other items to present. Among them was a TV Alarm Clock: “This was a small unit that could be placed atop a TV set. There it would show the time of day in large, alpha-numerics on the TV screen. It could also be used as an alarm-clock. You could set a wake-up time on the screen, and the device would turn on the TV set at the appointed hour. This was another product ten years ahead of its time, which often appeared to be one of my specialties!”

Surprisingly, this caught Eric Bromley’s attention: “Eric Bromley really liked the TV Alarm Clock. He came up and visited me at Sanders on August 12th. Unfortunately, like so many other things I tried to work on with Eric, the TV Alarm Clock went into semi-limbo. In a telephone conversation with him five days later, he had already cooled to the idea. He did confirm during that phone call that both

the Kid-Vid and my interactive video patent licenses were ‘something we could definitely get together on.’ That meant that Coleco intended to sign license agreements if the prices were right.”

In January 1983, before delivering what would be his last Coleco-released product, the inventor indeed tried interfacing ColecoVision with external video sources, such as a videodisc player, to enhance the capabilities of the machine. He managed to convince Coleco’s executives of the relevance of his new project. As he put it himself in his autobiography, Videogames: In the Beginning: “That finally allowed me to send off a letter to Eric Bromley, at his request, offering Sanders’ engineering services in support of a subcontract from Coleco to Circuits & Systems in Hollis, New Hampshire.”

Long before NEC would release a CD-ROM add-on for its PC Engine console, Ralph Baer was already thinking about a similar device: “The system we had designed at Sanders involved the use of a videodisc player to

provide game backgrounds as well as scene-related graphics—all nested as data on a videodisc.”

But was such hardware ever delivered to Coleco’s offices? “Drew [Sustein from C&S] sent a proposal for this development work to Marshall Caras, then Coleco’s Director, Advanced Research and Development, initially quoting \$55,000 for the job. Marshall got out a signed contract after much typical Coleco haggling. Several months later, C&S delivered functional hardware to Coleco that allowed their new ColecoVision game units to be interfaced with an external videodisc player. No one had done that with a video game system, ever.”

As was Ralph Baer’s usual process, the key was now to find a company to work with and to whom he could sell this patent. In this particular case, as Coleco manufactured “only” the vid-

eo game console, they would need a new partner for the disc-reading device. Many companies were already manufacturing and selling such appliances, for example, Sony and Philips. But those two companies were unreachable because of their lofty status and also due to their geographical locations being Japan and the Netherlands, respectively.

As had been the case for some time, different video formats were at war. The early 1980s was the era of the widely-known LaserDisc from DiscoVision, the emerging VHS from JVC and the competing Betamax from Sony, and an obsolete yet inexpensive disc, the CED (for Capacitance Electronic Disc), commonly known as videodisc, from RCA. It was the latter that had caught the attention of Ralph Baer. The inventor preferred this format over the others because of its theoretical power. Those discs, which were





kept in a protective case, could hold nearly twice the playing time and delivered twice the data rate in digital applications. Furthermore, as they were inexpensively produced from masters simply by pressing—like phonograph records—it seemed like a prime contender.

As a matter of fact, RCA had already manufactured a disc reader based on the technology, called SelectaVision, but with miserable sales results. Unfortunately for RCA, nothing went as planned in the video market. As Ralph Baer notes: “SelectaVision arrived a year or two too soon. Nobody wanted a video player that couldn’t record.”

Although times weren’t good for RCA and SelectaVision, it was a great time for Baer to start discussing new applications for the device and the format: “Between 1982 and 1983, I had a number of discussions with Jon Clemens, the general manager of

the SelectaVision videodisc program at the RCA Labs in Princeton, New Jersey. Jon and I had previously met at a number of various tame technical conferences and had exchanged ideas about using videodisc players in conjunction with microprocessor-controlled video games.

Here was our chance to finally make it happen!”

Less than ten years before Nintendo and Sony would start working on a disc-based device to be interfaced with cartridge-based consoles in 1991, Coleco was on the verge of achieving it thanks to Ralph Baer, who put the two companies in touch: “I put him [Jon Clemens from RCA] in touch with Eric Bromley immediately. They began to negotiate a development program for a five-inch version of RCA’s SelectaVision machine that would suitably interface with ColecoVision.”



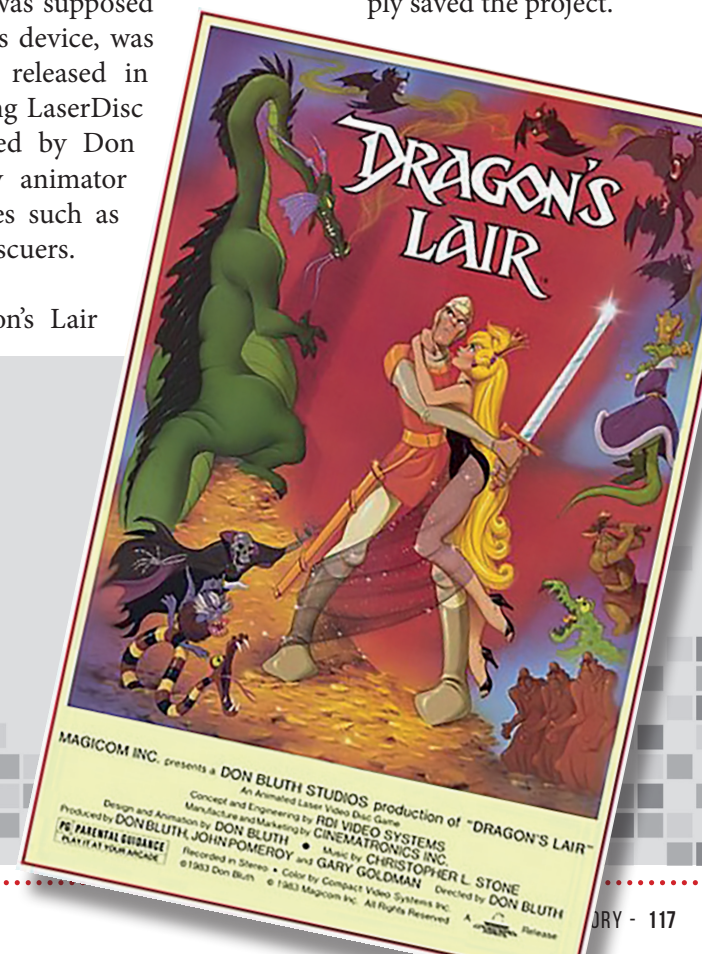
As far as the inventor could remember, the negotiations between Coleco and RCA went well. The device was even part of a technical meeting that took place at RCA’s Indian Road facility in Indianapolis. Several Coleco executives attended that very meeting, in which the product size, the data nesting, and the extracting and branching requirements as well as schedule and cost projections were discussed: “I thought we were well on the way to revolutionizing the video game industry,” Ralph Baer recalls.

One of the games that was supposed to take advantage of this device, was Dragon’s Lair, a game released in the arcades in 1983 using LaserDisc technology and designed by Don Bluth a former Disney animator who worked on movies such as Robin Hood and The Rescuers.

However, during Dragon’s Lair

development, the design team hit more than one road block and the project almost didn’t make it to the finish line.

Fortunately for them, Coleco would arrive to save the day. In a way to showcase the new technology developed by Ralph Baer and the RCA team and also to improve their ColecoVision library, the Hartford company managed to get the home rights for the game. This couldn’t have come at a better time for Don Bluth team. In fact, this money injection from Coleco purely and simply saved the project.



Nevertheless, as it turned out, the ADAM incident had dealt Coleco a blow, and the company's reputation was tarnished for good. Furthermore, the cost of this fiasco put a halt to any further discussion of projects between Ralph Baer and Coleco. Because of that, there would never be a disc-reading device interfacing with a cartridge-based one, as upcoming systems would use one format or the other, but not both together. However, ColecoVision would be used as the basis for a similar project undertaken by a competitor, Hasbro, in 1985—the NEMO (which stood for Never Ever Mention Outside) project.

### *The Super Game Module*

Back when the CED add-on project started, Coleco already had another one in mind. As ColecoVision was very much alive and its Expansion Module very popular, they decided to create an add-on that would expand the memory of the machine. In the early 1980s, technology was changing extremely quickly, and a fast device one day could become slow overnight. This is how the Super Game Module

got started. Once more, the idea was to bring arcade games into the home—but this time to a fuller extent. Indeed, the earlier ColecoVision versions were generally truncated by a level or two and were often missing cutscenes as well. It was time to fix these problems.

The device would be almost the same size as the console itself, and it would get its own expansion slot on the bottom-right side, just like on the ColecoVision console. In addition, it would have a mysterious slot on its left side. As technology evolved, Coleco planned not to replace cartridges with a viable alternative to existing tapes and disks, the stringy floppy, also known as the wafer or microwafer, developed by Exatron. This format was deemed faster and more reliable than a data cassette and was half the price of a floppy disk, according to the company.

Capable of containing up to 128Kb of ROM, those tapes could make use of the extra 32Kb of RAM offered by the Super Game Module. On top of that, ColecoVision still had its 16Kb

of RAM and 8Kb of ROM. The resulting combination would have offered the player over 100 different game screens for a single game as well as the possibility of storing high scores and initials for each. Originally slated for an August 1983 release as advertised in many different magazines, the device would have come with two Super Games: Buck Rogers–Planet of Zoom and Gorf.

However, despite being announced in the company's catalogues and on the 1983 ColecoVision box, the project had to be canceled. The Super Game Module's presence on the show floor at CES of Winter 1983, as Bill Rose recalls on the [colecovision.dk](http://colecovision.dk) website,

sounded the death knell for the device: "The microwafer drive was the endless loop I mentioned. Didn't work. The Super Game Module was supposed to be based on that, but as CES neared, we realized it couldn't cut it. The unit that went to CES had to use ROM'd games 'under the covers.' [...] We would simply read the ROM bank code off the tapes, delay starting the game for a period of time, and then play it from the ROM. Had some quirks too. If someone removed the tape during play and put in another tape, the old game continued to play unless they hit reset. Some uncomfortable moments in front of press as the demonstrator screwed up. The rest is history."



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CBS™ ColecoVision™ will continue to offer the most advanced technology. An up-coming super game module adds over 1 million bits of information to the system, and a home-computer keyboard will put the full power of CBS™ ColecoVision™ at your fingertips!

This sticker was present on some of the ColecoVision boxes to advertise what was incoming, including the cancelled Super Game Module and the upcoming ADAM computer.



## In the Garden of Eden

The late 1970s and the early 1980s saw not only dramatic improvements in video games but also a revolution in computers. Commodore reigned in North America, releasing its VIC-20 and Commodore 64 computers in 1980 and 1982, respectively. Their upcoming Amiga project would push the envelope even further. Apple, while preparing the Macintosh revolution to come, was standing proud with its Apple IIe, an enhanced version of the original, released in 1983. IBM also made its presence felt, starting in 1984, with its PCjr. Meanwhile, in Europe, the American manufacturers had a lot of competition coming from the UK, especially from Sinclair and its ZX computers and the BBC Micro, both released in 1981.

Arnold Greenberg, the founder's youngest son, was still the CEO of Coleco Industries and confident

about entering this new area, as he said in an interview he gave to the magazine Video Games in their June 1983 issue: "I'm very positive about the industry and, more importantly, about the great opportunity that the industry has to keep growing. Now, by industry I mean both the video game industry and the home-computer industry, which I define to be under \$500 at retail. Increasingly, those two industries should be treated as one."

Arnold had astutely noticed that those computers were sold mainly as is and included close to nothing in terms of accessories. Furthermore, the competition's machines were extremely expensive. The Commodore 64 retailed for \$595 without a screen or a disk drive; the Apple IIe, on the other hand, was also sold with no frills for a whopping \$1,395! Finally, the IBM PCjr was available for a pricey \$1,269.

There was definitely room for im-

provement on the marketing side of things. However, computers are not built by marketing people. The project really started on the ashes of the Super Game Module. It was this canceled device that gave birth to a stand-alone console. The failed Exatron stringy floppies were replaced with regular tapes, called digital data packs, which also required certain modifications, as Jules Gilder revealed in his ADAM review for Byte magazine in their April 1984 issue: "Several modifications have been made to the plastic cassette shell so that it is not possible to use a standard audiocassette in the ADAM computer or place an ADAM digital data pack into an ordinary tape recorder. Changes were also made to the tape media, according to Coleco."

Right from the beginning, emotions ran high at the weekly Thursday meetings for the CompuVision project.

There was always a fireworks display whenever the visions of Eric Bromley, the engineer, and Arnold Greenberg, the marketer, collided. Those present for the show including consultants flown in for the express purpose of helping Coleco create the best computer possible.

The subject of disagreement was the innards of the computer. Bromley wanted to build a state-of-the-art computer with features appropriate to that end, while Greenberg wanted to design a decent computer that skimped on features in order to decrease the retail price for consumers.



With 17 million units sold, the Commodore 64 holds the Guinness World Record of the highest-selling single computer model of all time.



Both camps had points to make, but one of them would eventually have to acquiesce...

The rationale behind the device's name was revealed by Arnold Greenberg at a New England Life Insurance event on September 28th, 1983, while taking questions from the public: "We wanted a name of either gender, short, easy to spell, bold, strong, and perhaps somewhat classical. I don't know if "ADAM" fits that bill, but it suited our fancy. [...] For us, ADAM is the first of a new breed."

Arnold Greenberg likely had a hand in choosing the tape player for the 1983 ADAM computer, because it was decided to go with the less expensive option. When asked whether the ADAM would make use of a stringy floppy disk, Eric Bromley clipped: "It's not a stringy floppy, it's a digital data pack. The two are worlds apart, and

ours work."

However, the computer wouldn't be sold on its own as was the case with the competition. Unlike the most common home-computers of the time, the ADAM was not an all-in-one type. As with many of today's PCs, the keyboard and processor cabinet were two different units. Furthermore, to offer enhanced value for its customers, Coleco decided to bundle it with a letter-quality printer. However, the boss once again decided that the cheaper option—a daisy wheel printer—was better than the more common dot matrix ones.

Purely in terms of hardware, the ADAM had more or less the same architecture as the ColecoVision unit, but it was souped up with 80Kb of RAM for its Zilog Z80 central processor unit, 16Kb of video RAM for its Texas Instruments TMS9928A, and 32Kb of ROM.



It's important to note that the ADAM was not originally designed to work on its own, but rather as Expansion Module #3, a keyboard that could be plugged into the expansion port on the front of the ColecoVision unit. However, as the project went on, it gradually became clear that the ADAM would need to become a stand-alone device as well. Thus, what had begun as a simple expansion module would morph into a fully-fledged computer—an unfortunate turn of events that would cause the untimely ruin not only of the video game division of Coleco but of the company as a whole.

When the ADAM was first introduced during Summer CES of June 1983, Coleco's officials were not stingy with compliments: "We think it will have the same impact on home computing that the introduction of ColecoVision had on programmable video

game systems."

Arnold Greenberg firmly believed in the ADAM. Just as ColecoVision was Eric Bromley's brainchild, the ADAM was Arnold's. As he told Video Games magazine in June 1983: "The key to competing is having the right product, whether you're large or small. And our product is right." In fact, he was so adamant that he abruptly stopped the manufacture of ColecoVision in order to make way for the ADAM. Even though Coleco's flagship console was selling extremely well, the computer project was given top priority. ColecoVision had to take a back seat.

Something that worried not only his colleagues but also the shareholders was that Arnold Greenberg's confidence in the ADAM project led him to eventually sell off the extremely profitable above-ground swimming pools division, which was still generating mil-





lions of dollars in revenue. As you may remember, Coleco was the country's largest manufacturer of pools of this type.

Furthermore, Coleco produced all of the components for the ADAM, from the circuit board to the numerous metal parts, and also assembled the printer and data drive. Each and every one of the computer's parts was built or installed at one of Coleco's many factories.

However on the show floor at CES, the journalists could see that the computer was not in live demonstration mode. Even worse, it was inside a plexiglass display case with puffs of smoke coming out the back. For those who were present during the event, it was a sneak preview of what was to come.

Priced at \$725 to target the average customer, the Adam tempted tech consumers with a robust computer experience including a tape drive and space to install a second one, a

keyboard, a daisy-wheel letter-quality printer, and a couple of ColecoVision controllers. The entire ColecoVision console library was compatible with the home-computer, which sported its own cartridge slot on top. As a matter of fact, a game was included in the package as well, Buck Rogers-Planet of Zoom, the same one that should have been bundled with the unreleased Super Game Module.

However, this was not the only bundle released. Coleco, faithful as ever to their Expansion Module policy, made sure that the newly released home-computer was also available to ColecoVision owners as Expansion Module #3—thus replacing the canceled Super Game Module. There were slight differences between the two bundles. In the expansion bundle, the computer had a plug on the back to be inserted into ColecoVision's expansion slot. In this case, no controllers were included, as the console would already have come equipped with them.

Finally released in October 1983, the computer missed its original release window by three months, during which time and money began to run out while expectations remained as high as ever. Unfortunately, when launched, the ADAM was crippled by various issues including its obscure design choices. One particularly tricky one for customers was the fact that the power button was placed on the printer and not on the computer itself. This meant that, if the printer stopped working for any reason, none of the devices could be used. Another issue was caused by a surge of electromagnetic energy generated on startup that caused the irremediable loss of data on the digital data packs if they were put near, on, or inside the ADAM. To make matters worse, before the issue became known at Coleco, the first version of the user manual told users that, in order to speed up the process, they should insert the tape before booting

up the computer. This was changed later on to avoid the data loss issue when starting the ADAM.

According to former Coleco employees, the testing phase was done with so little care that, on one occasion, a printer even caught fire. And, while most Coleco employees were not aware of those issues, others were well aware of the debacle that lay in store for the company.

As expected, the computer sold well, thanks to its attractive retail price—always a key point in Coleco's marketing strategy. However, it proved to be a double-edged sword because as many computers were returned as were sent out.

The reviews published between October 1983 and April 1984 tried to show the ADAM in its best light, but the reviewers simply couldn't ignore



the numerous issues they discovered during their tests. Between the data loss, faulty printer, and software bugs, the ADAM was destined for a short run. This failure was such that Coleco even faced a class-action lawsuit.

It couldn't even be saved by the floppy disk (51/4") drive released in late 1984 or by a contest to win an ADAM in Big-K magazine. Also ineffective was the announcement at Winter CES of 1984 of a modem that could transfer ColecoVision games to the ADAM. Even a price cut to the \$499 price point, the retail price envisioned back when the project was in its infancy, was useless. Finally in late 1984, Coleco even offered some scholarships to new ADAM's owners but it was already over. It was simply too late.

The company lost \$35 million in late 1983 (the time of the ADAM launch) along with another \$13.4 million in the first nine months of 1984. Finally, on January 2nd, 1985, Coleco announced that it

was discontinuing the ADAM computer: "It is no longer in the company's best interest to continue the significant costs and risks necessary to keep Adam competitive," said Arnold Greenberg in a letter to shareholders.

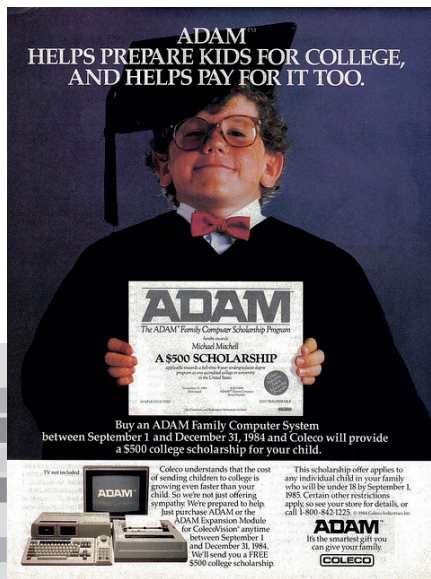
Nevertheless, the company maintained that it was continuing to support ColecoVision, the production of which had earlier been stopped to make way for the ADAM. Sadly, on the same day, 75% of the 150 Advanced Research and Development staff were laid off just as they came back from their holidays: "It was the morning

after the New Year's holiday break in 1985, we'd all just arrived at work not too long, still milling about, talking amongst ourselves, when all of ARD were called to the conference room in the executive wing. That was when we were told most of the ARD will be let go, effective immediately. Only a skeleton crew was to be kept on to wrap up current projects. We all didn't know what to say; it was a dark day for ARD and Coleco," remembers Frank Lam, former artist in the ARD at Coleco.

After nearly two years on store shelves, the "right product," as it was called by Coleco's CEO, still hadn't managed to live up to expectations. As John J. Anderson, former writer and editor for MacUser magazine, said as early as March 1984 in Creative Computing magazine, the ADAM had caused "a trail of broken prom-

ises, unfulfilled expectations, and extremely skittish stockholders."

According to Bill Rose, in an article on the colecovision.dk website, the ADAM was not the only computer the company had worked on: "What no one knows is that we also developed an Apple II knock-off in three chips. However, following on the heels of Adam, the banks wouldn't loan the money to go into production, even though we did complete the design. ASICs built prototypes and had negotiated with JVC to build it. It was a landmark machine. It used the Windows concept before the Macintosh was out (no one knew to call them "windows", and we never patented the idea). It also included a 2400 baud dial-up modem and a phone. We could play head-to-head games over the phone lines,





download and upload files (even unattended overnight), etc. Pick up the phone, your contact list would pop up,—in the middle of a game!—make the call by pushing a button or dialing, and then resume the game.

Touch the calculator keypad and a [calculator] would pop up on the screen, etc. Very cool and way ahead of its time. We had working models—don't know what happened to them."

### *Surviving the Crash*

After having been dealt several severe blows resulting in huge losses (as was the case with the numerous Telstar models and the ADAM computer that failed to deliver on its promise), Coleco was veering closer and closer to bankruptcy. Sadly for the 50-year-old company, it wouldn't be around long enough to celebrate its 60-year anniversary.

Contrary to popular belief, Coleco

didn't stop making video games because of the video game crash (also known as the Atari shock) of late 1983 and early 1984. The fact that the company wanted to solely focus on the total fiasco that was the ADAM computer was, more than anything else, the reason for this sudden change. Furthermore, in terms of video game design and production, Coleco had know-how that allowed them to create amazing arcade ports and great original games that were objectively more advanced than the competition's. Also, as previously mentioned, the Hartford company wanted only the best games on its system, which meant that not just anyone was allowed to develop software for ColecoVision, a situation which ensured that only interesting games were developed. This principle would be followed to the letter by Nintendo with its upcoming Famicom/NES. So, Coleco still had several cards to play, but as Confucius

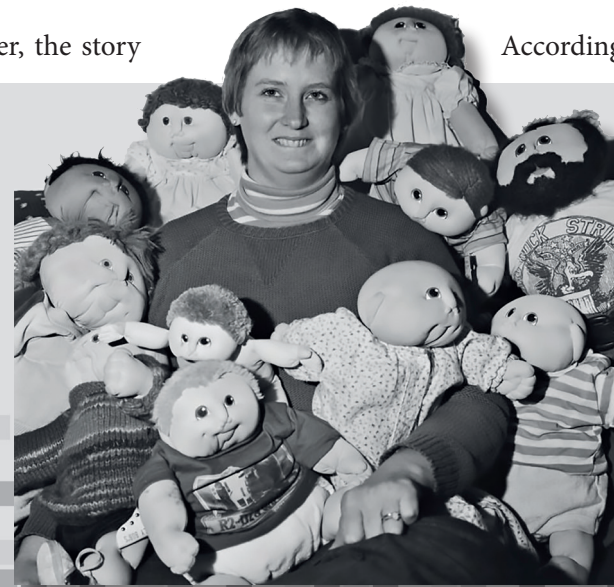
said, "A person who chases two rabbits catches neither."

In 1978, a man in Georgia named Xavier Roberts incorporated his company, Original Appalachian Artworks, Inc. He was producing soft sculpture dolls named Little People Originals. An art student himself, Mr. Roberts put the quilting skills that he had learned from his mother to good use and manufactured hand-stitched fabric sculptures, the Little People. Unlike many similar toys, Xavier Robert's Little People were first available at arts and crafts shows. An interesting twist was that a customer would not buy the doll but rather "adopt" it, and each of the doll babies would be offered with a unique name as well as a birth certificate. It was a concept that would prove successful in fueling the upcoming Cabbage Patch Kids craze.

is not as simple as it seems, as Xavier Roberts would be sued by a woman claiming to be the inventor of the concept, accusing Xavier of stealing her original idea. During the 1970s, an art school student from Kentucky named Martha Nelson Thomas had started experimenting with soft sculpture, too. She also came up with some rather large dolls that she would offer for "adoption" at crafts fairs. That sounds strangely familiar, doesn't it? Not only was the concept similar, but the design of the dolls was exactly the same. The lawsuit was settled amicably, but the amount has never been disclosed. Martha Nelson Thomas was not interested in money, but she couldn't bear seeing her "babies" exploited for that sole purpose, as Xavier Roberts and Coleco gladly did. But, how did the former Connecticut Leather Company come to acquire the rights?

However, the story

According to Sydney Green-





berg, who, starting in 1980, was in charge of the International Marketing department for Coleco (he was actually the one and only person in charge of this division), Original Appalachian Artworks asked several companies to mass produce the dolls, including giants such as Mattel, Hasbro, and even Marvin Glass and Associates, with which the Hartford company had worked in the 1960s. All of them refused to bet on the soft sculpture doll babies. As a matter of fact, Coleco was the last enterprise to be asked. But, as beggars can't be choosers and because the deal was offered at a significantly reduced price (Original Appalachian Artworks had been adjusting the clauses), Coleco Industries chose to bet on those toys thanks to the initiative of Al Khan, director of licensing at Coleco, who thought it would be the start of something really big. The contract was signed in 1982 to begin production the same year so that the dolls would be ready in 1983.



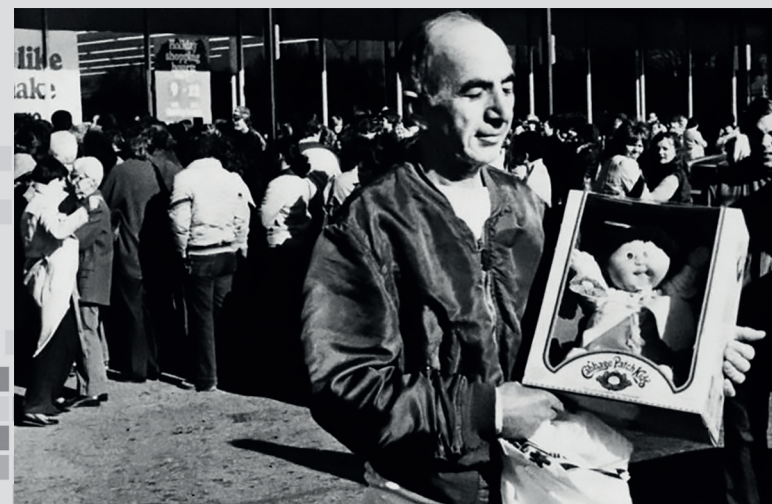
After having found a company in Southeast Asia to mass produce the toys and having carefully crafted a marketing plan, the name of the dolls was changed from the Little People of Xavier Roberts' company to the Cabbage Patch Kids of the partnership between Coleco Industries and Original Appalachian Artworks. The name actually comes from the traditional little white lie told to little children about where babies come from. (They are found in the cabbage patch, of course!) This quaint narrative was incorporated into the marketing plan and into the dolls' official website. According to that site, it was the "bunnybees" who led Xavier Roberts to the cabbage fields where they spread their magical crystal dust on the vegetables, which causes Cabbage Patch Kids to be born.

The toys first became widely and nationally available during the



holidays of 1983. Even the expectations of Al Khan, who felt they would become a hit, fell far short of the truth: the toys actually caused riots in several stores around the country. The craze was so big that an instant black market for Cabbage Patch Kids was created, with some people buying from clever resellers who had been able to foresee events. Even to this day, parents remember the trauma of that product release. Suddenly, little girls didn't want anything to do with Mattel's Barbie dolls. Instead, they desperately wanted to adopt their own Cabbage Patch Kid. The marketing tour de force pulled off by Xavier Roberts struck a chord deep within

children's psychology. Coleco's huge existing distribution network gave the Cabbage Patch Kids access to a huge market to spread their homespun fantasy in the minds of people everywhere—but mostly of young girls. It worked perfectly. The campaign was flawless, and the 2.5 million dolls the company had manufactured sold out rapidly everywhere. Another thing that made the toys successful was that, as with the products of their doll manufacturing rival Mattel, children could buy extra outfits for their doll babies. These accessory lines were cheaper to produce, took less storage and shelf space, and allowed for bigger margins. As a final touch, each of the dolls was





produced with the signature of Xavier Roberts on its left buttock.

According to Arnold Greenberg, their dolls were completely different from the competitors' and, for that reason, deserved a spot at the top: "Barbie represents the perfect golden Californian. No warts. No pimples. The kind of girl every kid perhaps would like to grow up to be. Cabbage kids are all different. They are not perfect. They represent you and me with all our warts. They are almost anti-heroes. They require a lot of care and loving."

As had previously (and sometimes unwisely) been done, Coleco decided to pull out all the stops and ramp up production, and only one year later, in 1984, 20 million dolls had been produced. However, for once, it proved to be the right decision at the right time because the cumulative sales of the dolls reached an



incred-  
ible



\$600 million in 1985. But, unfortunately for Coleco, the craze was not here to stay. According to former Coleco employees, some executives in the company were convinced that they were holding the next Barbie phenomenon in their hands—but they couldn't have been more wrong. Still, the last word on the fad hadn't been written yet. Sales didn't stop as abruptly as is often reported on the Internet. In May 1985, Cabbage Patch Kids were still the third most sold toys behind Transformers and Masters of the

Universe. They even climbed back up to second in June of that year. As Coleco kept producing the dolls without paying attention to the signals that sales were slowing down, they were caught holding a large inventory of unsold Cabbage Patch Kids. This led to a \$111 million loss in 1986 despite a new Cabbage Patch Kids animated TV series aimed at getting the toys back into kids' minds. Though it may seem callous, unlike Col-



eco, kids had moved on, leaving the doll babies behind them. However, the company wasn't ready to give up just yet on the Cabbage Patch Kids or other toy making concepts.

For his part, Xavier Roberts, with money rolling in from this wildly lucrative deal, had his own plans, which he started to set in motion. He used some of that money to renovate an old abandoned clinic and converted it into the Babyland General Hospital, in which the Cabbage Patch dolls were "born." This one-of-a-kind "hospital" for the dolls had a maternity ward, nursery, and adoption center, complete with "nurses" in uniform. The Babyland General Hospital still exists today on the outskirts of Cleveland, Georgia.

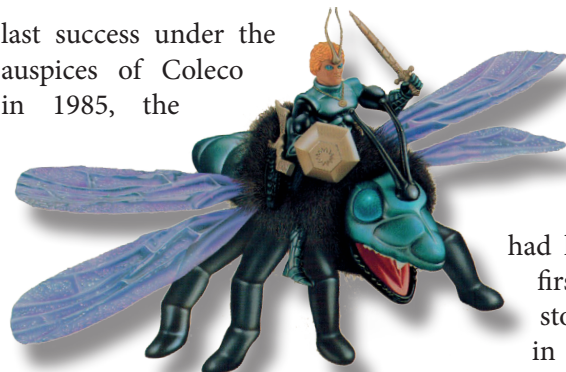
Even though the Cabbage Patch Kids wouldn't keep Coleco from an upcoming and rather violent demise,

they are still fondly remembered, and some of the original models are now very rare items that are sought after by collectors around the world. They often change hands for thousands of dollars on auction websites. As one example of their impact on the country, the dolls were chosen as the official mascot for the 1992 US Olympic team, and all United States presidential and vice-presidential candidates had their own Cabbage Patch Kids, usually depicted with exclusive clothing. Coleco even released a Cabbage Patch Kids video game on their ColecoVision console which is, surprisingly, one of the best games available on the machine, according to ColecoVision connoisseurs. During the Coleco years, as the dolls' license successively changed hands, kids were even able to enjoy Cabbage Patch Kids cereals (No, they weren't made out of cabbage).

While those dolls were enjoying their



last success under the auspices of Coleco in 1985, the



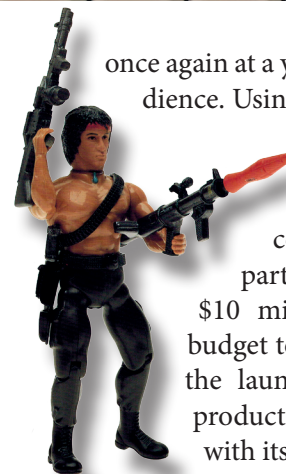
company re-leased another rather strange set of action figures, Sectaurs: Warriors of Symbion. What made them unique was that each hero or villain was accompanied by a terrifying, furry, wild-eyed giant insect. They were extremely popular, but they were expensive both for Coleco and the average consumer. Despite that obstacle, many children did get one, and the Sectaurs' popularity led Tim Clarke and Maureen Trotto to release a five-episode TV mini-series that aired shortly after the toys' release in 1986. This mini-series is not to be confused with the 17-episode animated series that aired towards the end of 1986. Marvel comics also jumped on the Sectaurs bandwagon by publishing an eight-issue limited series about the insect riders.

In 1986, Coleco obtained the rights from Lorimar Television to produce talking Alf dolls based on the furry cat-eating alien who had his own television series. The first one was a cassette-playing storytelling doll. Using the built-in cassette-player and tape bundled with the Alf doll, children could enjoy listening to the alien telling stories about himself or his home planet. Several tapes were available, and Coleco knew that kids who loved the show would love to know more about its extraterrestrial star.

After the Cabbage Patch Kids had reached the pinnacle of their success, seeing that it would not last, Xavier Roberts created another line of soft sculptured toys, the Furskins. Roughly the same size as Cabbage Patch Kids, the Furskins were c u d - dly plush b e a r s target-e d



once again at a young female audience. Using the same strategy as they had with the Sectaurs, the company used part of the product's \$10 million marketing budget to make sure that the launch of this new product line coincided with its own 17-episode weekly animated series.



Also in 1986, Coleco obtained the rights to yet another Hollywood franchise, Rambo, and more specifically, Rambo: First Blood Part II, commonly referred to as Rambo II. Specifically choosing this license was not the brightest move because the action figures were targeted for young boys who were still too young to watch the movie in a theatre because of its R rating. However, that didn't prevent

Coleco from moving forward with the project anyway. They created two factions: The Force of Freedom and S.A.V.A.G.E or, put simply, the good guys and the bad guys. Each group included six members and many accessories. Also available from Coleco was the S.A.V.A.G.E headquarters that constituted the bad guys' command base. Furthermore, the company ordered a five-episode mini-series as well as a 65-episode animated series that aired from September to December of 1986. The total promotion budget for this license was over \$22 million.

Coleco tried two last bold moves in 1986 by acquiring two more companies. During the course of the year, the Hartford company took



Coleco's last bold move was its two last acquisitions: Tomy and Selchow & Righter

**COLECO**



**TOMY**



over Selchow & Richter, a board game manufacturer that owned prestigious licenses for games such as Scrabble, the famous word game, and Trivial Pursuit, the iconic trivia game. But Selchow & Richter didn't fully satisfy their appetite for acquisitions, and on December 31st, 1986, TOMY officially became a subsidiary of Coleco Industries. Founded in 1924 in Japan as Tomiyama (from its founder's name Eiichi Tomiyama), TOMY is a toy company that has created powerful brands such as the Transformers, Choro-Q, and Microman. They would later merge with their longtime rival Takara, resulting in the creation of Takara-TOMY in Japan and TOMY everywhere else in the world. Even though it was supposed to bring a much needed balance to Coleco, it would not be enough to save the company from the terrible fate that awaited it. But, Coleco Industries was not ready to surrender just yet.

One year later, Coleco released another Alf doll named



Wise-cracking Alf with built-in phrases that were jokes related to the Alf TV series like:

“Be there or be square!” or “I’m a people alien!” Also in 1987, Coleco created a new successor in its long line of action figures, Starcom: The U.S. Space Force. As usual, various accessories were available, from miniature weapons to a huge action playset that would easily take up the space of an average living room floor.

During that same year, Coleco decided to do something similar with their remaining stock of Cabbage Patch Kids. Michael P. Price, a former employee of the company, worked on this project. “The idea was to have a voice module for the dolls as well as an infrared sensor so they would speak some random lines but also talk with each other or at least give the impression to do so.”



So, in 1987, the Cabbage Patch Talking dolls were released. Unfortunately, they didn't enjoy the same success as their voiceless cousins. Technically, their components were impressive: voice chips, touch sensors, microphones, and short range 49MHz receivers and transmitters to allow the interaction. It worked perfectly, and even though some parents found it a little creepy (that could still happen in 1987 when someone heard a toy box talking or singing), kids loved it.

It wouldn't, however, be enough to stop the hemorrhaging caused by the first version of the dolls and other misfortunes that would subsequently lead to Coleco's bankruptcy. Indeed, the dolls were not the only toys collecting dust in the company's various



warehouses.

Lest we forget, massive layoffs had started in 1984 and 1985, when the majority of the Advanced Research and Development staff (also known as the video game production division) was let go the moment they returned from Christmas vacation. That was followed by many more layoffs in Coleco's Upstate New York factories as well as in their Canadian ones.

Much of 1987 was sadly dedicated to closing offices around the country. This was also when the famous Château Saint-Ambroise in Montreal would close down after being roughly treated by the company. Some so-called renovations resulted in steel plates placed here and there around the building,



both inside and outside. It would remain unoccupied and derelict for the next 12 years. Then, in 1999, new and actual renovations took place. The building now hosts one of the best restaurants in the city and more than 200 different companies in an industrial loft-style complex.

The other factories that the company owned in Montreal have been either demolished and replaced or simply abandoned. Such is the case with one located in Ville d'Anjou that has been unable to attract tenants.

Coleco's Upstate New York factories would continue to hold on for the best part of 1987, but were eventually forced to share the fate of their Canadian counterparts in 1988, when Coleco was really struggling to stay afloat.

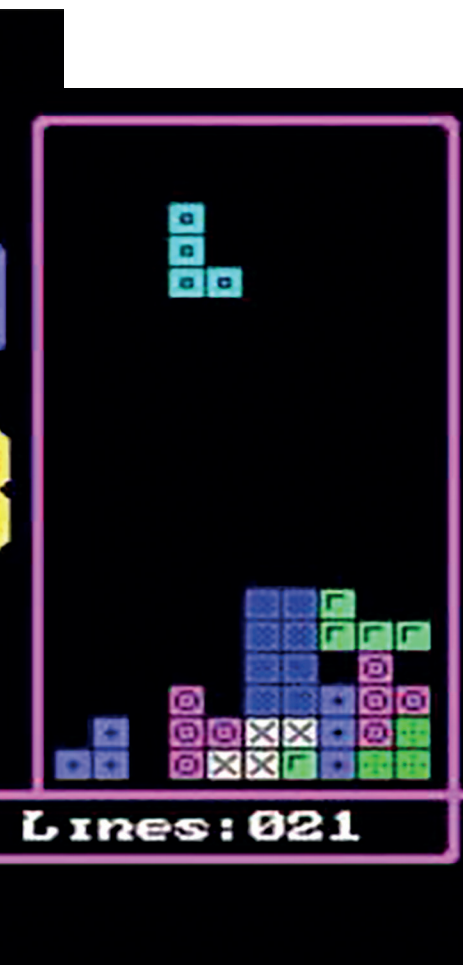
You now know the sad story of how a company that was on the verge of so many discoveries and a leader in so many fields had to file for bankruptcy in 1989.

Around 90% of the company's assets, including its complete line of toys, were purchased by its competitor, Hasbro, which took over TOMY as well. As for the other assets, which were mostly video-game related, they were acquired by E-Coleco, a company that is still active at the time of writing (2016) and still offers brand new games for both ColecoVision and the ADAM as well as some expansion modules and even repairs for those devices. Surprisingly enough, they also offer electric scooter parts. Another manufacturer that bought some of the remaining consoles was Telegames, which has since reshaped and revamped them.





## LEGACY



The Coleco brand laid dormant for nearly 20 years prior to its official resurrection in 2005. However, during its hiatus a number of programmers and brand loyalists are credited with working on unground projects geared towards a growing group of 'retro-gamers.'

The very first burst of nostalgia for the ColecoVision came from Kevin Horton, a programmer whose love for Coleco's console was unquestionable. In 1996, Kevin developed the first homebrew to ever be released on the console. It was a clone of Tetris, cleverly called Kevtris.

One year later, Telegames released Personal Arcade Volume One, a collection of ColecoVision software for

Windows PC. In 1998, the company released another compilation, called ColecoVision Hits Volume One.

Since 2001, River West Brands, a company founded by former Kraft executive Paul Earle Jr., acquired inactive brands and trademarks in order to revive them. River West Brands also took notice of the relevance of the Coleco and ColecoVision Brands and in 2005, created Coleco Holdings LLC in order to take the steps to officially acquire the trademarks and other Coleco related assets. Mark Thomann, CEO of River West Brands, decided to focus on electronic games in order to appeal to the memories of former ColecoVision players.

Thomann did not waste any time getting started. Indeed, the same year that he founded the company, he decided to resuscitate none other than the Head-to-Head brand, which released

a package containing two plug'n play devices. Plug'n play devices were very trendy in the early 2000s. They contained built-in games and allowed the player to connect the game directly to a television. The Head-to-Head video game system operated in this way, with 12 pre-installed games for one or two players. With a top-down view, the user could play football, hockey, racing, and boxing games, among others.

Then, a dozen more games were released to the general public. Word games and Sudoku were released for mainstream audiences, which helped resuscitate the Electronic Quarterback brand. Indeed, the sport games were introduced as new and modernized versions for all audiences to enjoy. For this occasion, Coleco also released electronic games for other sports, such as baseball and basketball.

# RiverWestBrands.

BRAND ACQUISITION AND ENTERPRISE DEVELOPMENT

The Nintendo Wii was also introduced in 2005. Its introduction was announced during the E3, and it was presented as a revolution that promised a new way to play and enjoy games, thanks to motion gaming, which let everyone play. Many manufacturers saw this as an opportunity, and Coleco was no exception. For this reason, Coleco was present with products such as Virtual Ping Pong, released in 2006, which allowed for up to two players to play a Ping Pong game with actual table tennis rackets connected to an infra-red device that informed the system when movements occurred. Another interesting product delivered that same year was Kick Boxing, another plug'n play device that included a pair of boxing gloves with sensors as well as knee sensors. With this apparel, Coleco promised kids that they could become the next Mike Tyson.

In November 2005, Coleco hinted at the comeback of the ColecoVision brand. Gamers were excited to see the dormant brand rebounding in such a significant way. However, it had been already planned that the product would not be a tech demo but a device similar to those released between 2005 and 2006. The company had no intention to compete with Nintendo, Sony, or Microsoft. One year later, Coleco announced the Coleco Sonic, a result of a deal with none other than SEGA, just as it did in the days of the ColecoVision, when Turbo and Zaxxon were included in the console game library. This deal would result in the creation of a portable device with a built-in screen and games. The titles, 20 in total, were taken from both the Master System and the Game Gear libraries. Among them, the player could find Sonic Triple Trouble, Alex Kidd, Altered Beast, or even Columns. Marketed as the PlayPal in Canada

and the United Kingdom and as the PocketGear in continental Europe, this handheld console could also be plugged into a television using a simple composite video cable that accompanied the system. The console used two AA batteries, but it could also be used with an AC adapter. After this fad ended, the Coleco brand became dormant for a period and was not seen again before 2014.

Indeed, it was in 2014 that the ColecoVision Flashback was released. It was manufactured by AtGames, which had previously made a similar release with the Atari 2600 Flashback, the Intellivision Flashback, and the Sega Genesis Classic (in both home system and portable versions for the latter). The company was not new to this and already knew what to do.

The system is of the same shape as the original ColecoVision console but is slightly smaller. Because of this drastic size change, the controllers do

not fit inside the console as they did in the ColecoVision released in 1982. Instead, they can be plugged into the front of the system, as is the case for all modern systems since the introduction of the NES.

As with the other Flashback systems, the ColecoVision Flashback's games are built into the system. There are 60 games, among which we can find Zaxxon, Jumpman Junior, and Venture. Obviously, the hit title Donkey Kong, which made the original system so successful, is not included, because acquiring the rights would have caused the retail price to be so high that no one would have been able to purchase the device. Indeed, one of the strengths of the ColecoVision Flashback was definitely its price. For as low as \$60, almost anyone could purchase one. As a reminder, the original ColecoVision was launched at a retail price of \$175 in 1982, which is now equivalent to \$430. At that time, the console had only one game.





Coleco was building steam and it seemed that the products that they released were enjoying more and more popularity with the gaming community. Coleco was seemingly back. This steam would continue until the early months of 2016.

Although it would be hard to compete with the magnitude of the failure of the Adam Computer, but it seems that Coleco would attempt to outdo their selves with the 2016 introduction of the now infamous Coleco Chameleon.

Before diving into this story, it is important to understand the background story of the unit as well as its inventor, Mike Kennedy. Mr. Kennedy, well known in the retro community, has launched a variety of fairly successful projects. As retrogaming was becoming more and more popular at the start of the decade, Kennedy created a retrogaming-only auctions site, which was a hit in the gaming community, especially in North America. The site became an alternative to eBay, catering directly to the gamers. Although the service was available worldwide, shipping fees for overseas locations were usually prohibitive, cre-

ating a huge limitation. Despite this, this service was a success and led to Kennedy incorporating a company in order to expand into other products.

Already on a roll, Kennedy devised his largest plan and passion: introducing a cartridge based system that played games from a number of platforms. He began connecting with a number of well-known programmers and industry insiders seeking help. The plan to most seemed to be a step backwards, considering that the last home system that used such a format had been released almost 20 years before but Kennedy would remain undeterred.

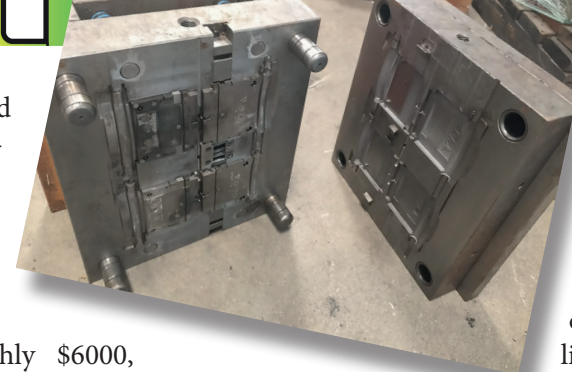
In 2011, Kennedy took a giant step forward towards his dream when he learned that Atari has sold its molds for the Atari Jaguar to a dental company. Even more exciting, the dental company no longer used the molds.

Within the regular gaming industry, it is known that developing molds for a gaming system is extremely costly. A company would need a design team, as well as hiring a company to create the molds themselves. It is

rumored that Kennedy purchased the molds for roughly \$6000, saving himself roughly a quarter-million dollars and years of development.

In order to recoup some of his investment, he began extruding a small number of Jaguar shells in various colors selling them to retro-gamers who were looking to customize their own gaming systems.

Unbeknownst to Kennedy, these two monstrous pieces of metal, each weighing several thousand pounds, were set to become the center of attention in the retrogaming community.



In 2013, after building a network of gamers and insiders, Kennedy realized that despite the obvious crisis in paper publications, there was no retrogaming-re-

lated magazine published in North America. Of course, the magazine Retro Gamer, published by the United Kingdom's Imagine Publishing, was available, but the price was very high due to import fees and the high value of the British pound. For these reasons, among others, Kennedy created a new gaming magazine, Retro. He joined with several colorful characters, including Pat the NES punk, and developed a team of talented individuals dedicated to delivering an interesting monthly magazine. This second step in modern entrepreneurship showed Kennedy that he was on

The Retro magazine always has cover full of reference, here with the Star Wars universe.



the right track.

With the success of a crowd funding campaign that created an explosion of magazine subscriptions, Kennedy announced that he was going forward with this project and that using the system would be just like in the old days—except this time, users would not have to blow on the cartridges.

By 2015, the project, consisting of the Jaguar mold, had been renamed Retro VGS (Video Game System). The project was off to a bad start from the beginning, considering the reputation of the original console and the poor commercial success tied to it. It looks like history has just repeated itself, because this is more or less exactly what happened in the case of Mike Kennedy's project. To maintain their Atari 64-bit system theme, the developers also wanted to use the same cartridges as the Jaguar, meaning they used a cartridge that was rather wide but also thin and small, with a tubular top. However, they must have known that it would be too much to use the controller that was released with the home console in 1993. Instead, they chose to go with

a repainted Wii U Pro Controller, which looked much better than the large, number pad-equipped joystick of the original version.

Hardware-wise, the Retro VGS was complicated at best, blurry and fuzzy at worst. From what was publicly displayed, the system was based on an FPGA. As the crowdfunding campaign defined it, "A field-programmable gate array (FPGA) is a large integrated circuit with an array of many logic gates that can be connected together to perform parallel and sequential functions by programming bits in random-access memory (RAM). An FPGA is similar in structure to common 'standard cell' digital application-specific integrated circuits (ASICs) which are programmed when they are created through a pattern in what are essentially bits in masked read-only memory (ROM)."

Later that year, the developers announced that a crowdfunding campaign was in development in order for the public and retrogaming community to support the project directly, even before it was to be released. One factor that may have hurt their cause was that they went to

Indiegogo instead of Kickstarter. The latter receives fewer unique visitors per day than the former, yet people know more about the crowdfunding website with the green and black logo than about its pink counterpart. One reason, arguably the most important, that led the Retro VGS team to the Canadian website was that the team did not have a working prototype. Indeed, in order to create a campaign involving a technical product on Kickstarter, an actual working prototype is required in the video presentation. Unfortunately for Mike Kennedy and his team, they did not meet this requirement.

However, this is not a real problem, as some of the most successful crowdfunding campaigns involving computer/gaming hardware have been launched on Indiegogo, such as the Sinclair ZX Spectrum Vega and its portable counterpart the Vega Plus.

The real issue with the Retro VGS lay, rather, in the fact that the campaign was overconfident and not fully prepared when it launched.

In its defense, the Retro VGS team managed to gain a lot of support from the developers. Some of them became convinced of the project's viability. Among these advocates, Matt Bozon, director of *Shantae*, *Contra 4*, and the *Mighty* series at WayForward, was not stingy with compliments. His praise remains on the Indiegogo campaign page (still online as of this writing): "I'd really love to play some [of] WayForward's games on Retro VGS. Fans of the *Mighty* and *Shantae* series have been asking for physical format for a while now. The Retro VGS would allow them to pop it in, power on and be playing instantly. Plus, game cartridges are just fun to collect! Wouldn't it be rad to see *Shantae* and the *Pirates Curse* on a retro cartridge with cool





sticker art? Yes it would!” Among the other fellow independent developers, some famous names were present as well, such as CollectorVision Games (The Adventures of Tiny Knight), DotEmu (Double Dragon Trilogy), Watermelon Games (Pier Solar), and even the German NG:DEV.TEAM (GunLord and Last Hope Pink Bullets).

However, several issues were present from the very beginning. First of all, the fundraising goal was set at nearly \$2 million. For a first project, even when it is backed by a positive business history, this amount is simply too much. One of the main mistakes that creators make when choosing crowdfunding is to see this tool as the one and only way to access funds. This way of thinking usually ends badly. Some strong projects have learned to use these platforms as a way to learn whether a project is viable. If the answer is affirmative, the project developers can then raise more money through traditional channels, such as grants or venture capital, given that they can support their case with their successful crowdfunding campaign.

Another element that angered the gaming community was the price of the actual system. The price was set at \$299, which was equivalent to the retail price of the Nintendo Wii U and just \$100 less than a PlayStation 4. Launched on September 4, 2015, with a limit of 45 days, the campaign was halted two months later on November 4, after raising only \$81,158 out of the total goal of \$1,950,000. Amusingly, shortly before this massacre was stopped, the actual amount of collected funding was decreasing, as people were already pulling out of the project in case it happened to succeed. Indeed, unlike Kickstarter, Indiegogo allows its creators to obtain some of the pledged funds even if the campaign does not reach its original goal. With this feature, called Flexible Funding, Indiegogo keeps a higher percentage of the collected amount.

Shortly after this first failure, Mike Kennedy and his team became quiet. This was understandable considering the broken hopes and dreams that the failure caused in the hearts of fellow retrogamers, who had hoped to obtain a fairly inexpensive system even if it was not as cheap as the Flashback.

While this was going on, Coleco began working with Chris Cardillo in attempts to further the visibility of the brand. Although, he had minimal experience in the gaming industry, Cardillo was both a Coleco brand loyalist as well as widely known in other industries for his marketing ability. He would eventually become a partner to Thomann in Coleco.

After spending several months researching the market, talking with gamers around the world about what products they hoped to see, Cardillo learned that gamers where most interested in mini arcade games, full size arcade games and newly developed retro style titles. Knowing that developing new material for retro machines would limit his market, he began research on developing a newer game system in which players could buy new games and play them on either an old-

er system or a newer system. Games would be both forward and backward compatible. Coleco would also be able to short cut selling another eight million consoles in order to service the market. A breakthrough occurred when he learned that Mike Kennedy had developed the Retro VGS which offered strikingly similar features.

Coleco did not see the inability of Retro VGS to crowdfund as a failure. Additionally, Kennedy had a large industry following as his magazine continued to grow and had just achieved newsstand physical distribution.

Even though the exact terms are still kept secret, at some point in December 2015, Mike Kennedy and the Retro VGS team ended their silence, to the surprise of the entire gaming community. Indeed, the game console that had failed a little more than a month previously was now named the Coleco

Basically the Coleco Chameleon was the Retro VGS re-branded.





Chameleon.

Coleco was back in the video game business, the very industry that had made the brand so popular, even though this popularity was short-lived compared to the other industries that Coleco had entered over the years.

A new crowdfunding campaign was announced, this time on Kickstarter, and the Retro VGS team promised to have a working prototype. The campaign was supposed to begin at the end of the winter, with an adjusted price intended to ease the wrath of potential backers who had been so critical on this point during the previous Indiegogo campaign.

News of the new system spread like wildfire. The initial marketing campaign aiming solely at the introduction of the product reached some 300 million measurable impressions on the initial press release. Seventeen

major industry publications ran with the story mostly positive, but others poking fun at the system.

Prior to engaging Kennedy, Coleco had already signed up to be a vendor at Toy Fair. Every year for the past 113 years, the American International Toy Fair is held in New York, allowing toy industry professionals to present their products to retailers and members of the press. This is the same event that placed Coleco on the map in 1954, when the company received an award for one of its leathercraft kits. With the reach of the news of the Chameleon, the company invited Mike Kennedy and his team to premier the new product to the world, unwittingly leading a worldwide controversy.

The company's booth at the fair was rather small, but its foot traffic was enormous, and space had been made to present the forthcoming system that would again place Coleco in the hearts of gamers. Mike Kennedy had promised a working prototype, and at first glimpse, he delivered. The black Jaguar-like case was connected to a television and, as Mike recorded and published videos, he could be seen playing games on what seemed to be

the actual system. However, according to Mike, he received some strange instructions from his so-called engineer for displaying the prototype: "It was then a day before I was traveling to the show that he came over to my house with the Toy Fair 'Prototype', with his instructions to NOT SHOW the back of the unit no matter what. But without any specific information as to why I shouldn't show it, other than it used an aftermarket connector that was composite-out and that was used because he didn't have the HD stable enough to get us through the show. I believed him and went to the show with that unit."

Unfortunately, on February 19, 2016, the downward spiral began because of a comment left by Mike: "During the show we were accused of not having that system even plugged in so I made the decision to take a photo of the back of the unit showing it was clearly

plugged in. If that was true about using the composite connector, I really felt people would understand why it was used and decided to show the pics. I didn't feel we had anything to hide. Then all hell broke loose."

The picture of the back of the booth began to circulate on the Internet, and a small group of users began to wonder how the Chameleon prototype was plugged in. Allegedly, it was made clear that the so-called prototype was fake and, in fact, the motherboard of a Super NES Mini—a second, smaller version of the Super NES released in 1997. Once the vitriol began, nothing could stop it. As the main interested party did not deny the accusations, the Internet erupted in a frenzy. Some claimed that the accusations were baseless, but the majority was able to prove that this was indeed an SNES Mini.

Interestingly enough, Coleco is no



The first Coleco Chameleon picture that started the controversy.



stranger to this way of operating. When the CES was held in summer 1982, the company presented the Expansion Module No. 1, which would allow players to use their Atari 2600 games on the ColecoVision. Coleco claimed to have a working prototype with an actual cartridge in it, but that proved to be untrue (see chapter 5). However, in the early 1980s, the presentation of the prototype took place behind closed doors, which meant that only a handful of people were present to witness the company's embarrassment. Furthermore, the Internet did not yet exist, social networks were not around to spread photographs, and people were less technologically adept. Despite the inadequate Expansion Module at the show, the product was eventually released and sold quite well.

By the second day of the show, Coleco had begun the day trending number three on Facebook's newsfeed. By the end of the day, they were trending number one. It seemed as though the 'mini' conspiracy theory was trumped by the demand for such a console.

Although he had a lot to celebrate,

Kennedy sat that evening in his hotel room with an internal debate: "I was left in a terrible spot at this point and I had a decision to make. Do I take this thing apart and see what was in it and quit the show or continue on with the show, demoing the games that were going to be on the system, and then address this issue with Sean when we got back from New York. Right or wrong, I continued on with Toy Fair and it continued to impress people and the games were very favorably liked."

Setting aside the 'mini-debate,' the show ended favorably. A major retailer of toys gave a commitment of 20,000 initial units. Other well-known gaming companies approached Coleco to work agreements for their games to appear on the Chameleon.

Nevertheless, once the web seized upon the story, it was the beginning of the end for the Chameleon project. Cartoons and MEME's of Kennedy circulated the internet poking fun of the unit.

Still, Kennedy's developers continued to state that although the prototype

borrowed a legacy power cord, the unit was original. With the advertised Kickstarter planned for launch just days away (two weeks after the show), Kennedy asked his developers to remove the guts of the Chameleon and place them in a clear shell to show the unit working. Coleco asked that those pictures along with a video of the unit showing the wires connecting to a television while a player operated the machine in one continuous camera shot be displayed on the crowdfunding site.

Kennedy asked his engineer to have the lead developer, who was identified as "Lee" and then later "Sean" to produce an actual prototype in a clear shell: "[Sean 'LEE' Robinson] told me that during the Toy Fair he was preparing the next 'prototype' board so I gave him the clear shells with explicit instructions from me to show 'our' PCB inside the shell. This was going to

be used to show the 'real' prototype."

"Soon after this he emailed me the images of the clear unit with the PC DVR capture card in it. But, when he first emailed me the images, he indicated this was our prototype 100%. I made a comment that it looked great (in the photos) and he responded by saying something like 'this is what we can do when given the proper time.' Keep in mind, these pictures were to combat the criticism of the 'fake' Toy Fair prototype and were given to me by him to post on Facebook to show people the real 'prototype'. Sean even joked about how people online were trying to identify the board in our shell, laughing and telling me they won't find it because it's our original work. He even made these comments through my car Bluetooth speaker with my wife in the car and she heard everything. Again, I believed him."

The picture that sealed the Coleco Chameleon's fate.



Both fortunately and unfortunately, the pictures were reviewed meticulously on the Internet, as Mike had known they would be. As people are increasingly educated these days, they quickly discovered that the clear shell bore a PC DVR capture card, and this discovery eventually led to the end of the project.

A joint decision was made by Kennedy and Coleco to cancel the scheduled crowdfunding campaign and Coleco began looking for answers.

Still in Kennedy's corner and hopeful that the product was working up to par, Kennedy reported to Cardillo that according to the developers that the PC board offered some use in the machine as a legacy part to show a working prototype and that the board would not be in the final product. Cardillo began researching methods in which a PC DVR board could be remotely used in the development of the console.

Coleco issued a statement on its Facebook page post openly addressed to Retro VGS:

"Chameleon Product: We are thankful to have a large group of passionate

engineers and retro game enthusiasts who follow Coleco and other product lines. It has come to our attention that the community has certain concerns over the prototypes involving the Retro VGS model. The team at Retro remains confident that their product is developed to the extent as described; However, in order to confirm or debase these concerns, Coleco has demanded to inspect the prototype units within a seven day time frame. At which time, independent engineers will review their findings and determine if those units are up to our standards. We will report some or all of those findings to the community so as long as they do not interfere with proprietary information. We remain hopeful that the community's concerns are merely speculations, but if there is merit to the concerns, then we have no choice but to abandon the project rather than release a sub-par product. During this time, we ask that the community allow us time to complete these inspections. Time extensions will only be granted if requested by the independent engineer. Time extensions and results will be posted here."

For the next seven days speculation

swirled as enthusiast waited to see if Retro VGS would allow the inspection, or if the deadline would be extended. Many members of the retro gaming community asked Coleco to end the project prior to the seventh day.

Although it seemed as though the Retro team fell silent, Kennedy and his team worked diligently with the developers to prove or disprove that the machine was working to standards.

In efforts to keep the community in the loop, Cardillo completed an hour long interview with Coleco Podcast's William Culver primarily documenting the timeline of events to that point. Finally, on March 8, 2016, Coleco issued the following statement formally ending the project:

"The Update that you were all anxiously awaiting: Retro VGS has decided that the work that they have created

is not sufficient to demonstrate at this time. Consequently, we can no longer proceed with the project and the Chameleon project will be terminated. This separation is amicable. We wish them luck in the future. We thank the gaming community for their continued support, input, vigilance and trust." With that, the project was canceled and would serve as a warning for every potential creator.

Ironically, the end result of the controversy left Coleco in a positive light for a number of reasons. First, fans of ColecoVision were happy to see the lengths that Coleco would go to in order to protect the brand. The initial perception was that retro gaming brands were quick to license their name with limited quality control. Secondly, both were happy to be involved in the process and felt that their concerns were handled well internally at Coleco.





It is reported that Kennedy eventually sold the Jaguar molds.

Later in the aftermath, Mike asked his so-called talented engineer to provide some sort of explanation: “Since this all fell apart I have been trying to get Sean to explain to me why he would point blank lie to my face about that being ‘our board’ and passing that two-bit PC board off as our prototype and he can’t give me an explanation that makes any sense, in fact I get no explanation other than that there was more going on in there than people can see. He mentioned we had chips located underneath the board even and assured me that the cartridge was also plugged into our cartridge connector. Something was just not adding up to me and I continued to lose sleep at night wondering how this all could have happened.”

Although the Chameleon is a project that Coleco wishes that they could sweep under a rug, the concept of the project proved that there was a large market for Retro products and even a cartridge based system. Coleco has not ruled out the possibility of some

type of cartridge based system in the future, however, such a project would take almost two years of development and would not, under any circumstance involve the Jaguar mold.

### *From The Homebrew Community With Love*

Currently, there are teams of passionate developers around the world that have sprung up and begun producing both licensed and unlicensed games for the original ColecoVision. Many of these developers create games with replicas of the original cartridges, boxes and manuals from the 1980’s.

One of the more popular developers is CollectorVision Games, was registered in 2009 and incorporated in 2014 by Jean-François Dupuis in Charlemagne, Québec, a city located north of the Island of Montréal, where Coleco Canada was established from 1968 to 1987. Jean-François was then joined by Toby St-Aubin, who acts as the company’s CEO, and John Lester, also known as Gamester81 on YouTube, who is the third and final partner in the company.

Contrary to another company serving the same purpose, CollectorVision Games develops not only ports for other games for the ColecoVision but—most impressively—original games as well. For example, Spunky’s Super Car was designed specifically for the ColecoVision and nothing else. This is impressive considering the ColecoVision’s very limited internal specifications in mind. In order to run on the original system, the game had to be programmed by Chris Derig using assembly language, the language most suited to the machine but also one of the most difficult to learn and understand. At a time of gigabytes and terabytes, Spunky’s Super Car had to fit a 32-kilobyte cartridge. CollectorVision Games, is now an independent developer, also makes games for ColecoVision, Intellivision, Atari 2600, TI-99/4A, NES, and Super NES, it also ports them on Xbox One and Wii U as downloadable software.

Daniel Bienvenu, is known as new-coleco on many forums. From his hometown of Quebec City, Canada, he answered the French mook Pix’n Love’s questions about what the ColecoVision represented for him: “It’s my childhood. My brother received the system for Christmas in 1984 and this was the first home video game machine that made its way to our home. We owned a Commodore Vic-20 and a Commodore 64 to have fun with. I already coded my own games in 1985 on the Vic-20[...].”

According to his webpage, Daniel started making games for the ColecoVision in 1999. The first one was a very simple Breakout clone that would be used to validate what he had learned. His last game, a GhostBuster clone called GhostBlaster, was produced in 2009 during what would be a long phase of self-described depression. He

## CollectorVision Games



developed his own tools and dev kits, which he shared with the community.

Within the vast community of developers is another Canadian programmer called Luc Miron, who is most commonly known under his working name, PixelBoy, from his label TeamPixelBoy. In 2012, around the time of the 30th anniversary of the ColecoVision, Luc also agreed to answer several questions from Pix'n Love. For example, when asked why he decided to invest so much time and energy in this project, this is what he told the French mook: "The ColecoVision is a perfect machine for homebrew production. Thanks to standard 32k of RAM, a [well-rounded] programmer can create a good game without spending years to develop it. Furthermore, the development tools are good and make life easier for homebrew developers. Finally the [fan] community is there and always more than happy to get the latest games as soon as they are available on the market. All of this allows people like me to still be motivated."

When questioned about the name TeamPixelBoy, which some consider

strange as Luc manages his label without the support of a team. Luc delivered the following explanation on his website: "While I operate this venture alone, any homebrewer will tell you that it's hard to do everything all by yourself, and homebrewers/publishers often need the help of others to get the job done. I like to give some importance to this aspect of my work by saying that if you help me with one of my projects, then you are part of my team for that project. And that's what the name 'Team Pixelboy' helps to underline."

Furthermore, TeamPixelBoy chose to offer packaging that differed from the original. Luc stated the reasons for this: "I chose not to do reproduction boxes because other companies like CollectorVision Games or developers like Daniel Bienvenu were already doing it. I wanted my game boxes to stand out. Some people like them, some don't. Personally, I like them just the way they are!"

Usually, the price remains the same, but sometimes there is a large gap: "[Every] game has its own backstory. For example, Ninja Princess'

artwork was produced by a professional artist. In the end the game box [costs] more than the game itself! This explains why this production is more expensive than the others."

Luc does not only make games, he is a tool creator as well. In order to help fellow homebrew developers, he started working on his own programming language for the ColecoVision, BasicVision: "I wanted to create my own programming language for a long time. I figured that doing it for the ColecoVision homebrew scene was the best solution. Of course, I would use it as well to create my own programs. I guess that I could use the C language but BasicVision is an important project for me."

Recently, Edladdin, a company launched by Ed Kelly in 2014, successfully completed a Kickstarter campaign for an arcade controller that is

compatible with the ColecoVision as well as for some adapters, raising a total of \$12,302—significantly more than the \$9,650 he had requested. Indeed, the controllers are compatible with not only the Coleco system but also the ColecoVision Flashback, Atari 2600, and Atari 7800. Ed also proposed a USB version of the controller for people who prefer to play through an emulator. This is further proof that new devices for classic systems are definitely a source of potential business.

The homebrew scene is very much alive, and the list of upcoming games for the ColecoVision continues to grow. The community, whether it is found on the AtariAge forums, one of the most active Coleco groups in the world, or on various Facebook groups such as ColecoVision Lunatics or Coleco Adam, are always eager to see new Coleco-related projects and allow the

The Super Arcade Controller works with both the classic ColecoVision as well as the ColecoVision Flashback.





aforementioned developers time to continue working on new and exciting ideas.

On occasion, homebrewers are able to obtain an official ColecoVision licensing agreement. One such company is Opcode Games. The company was launched by Eduardo Mello in 1997 even though his first software was first released in 2002, is specialized in porting games from other systems to the ColecoVision, which is still fairly impressive considering the amount of work and understanding of the underlying order of the internal components this requires. Eduardo was also the first to consider professional production on the ColecoVision. Nevertheless, even if Opcode Games does not make its own original games, it still possesses a secret weapon.

Indeed, Opcode Games is building actual hardware accessories compatible with the original ColecoVision. Opcode is also the company responsible for the release of the Super Game Module, the famous Expansion Module No. 4 that was eventually dropped by Coleco in October 1983. First available in 2012, after years of

hard work and reverse engineering, this device expands the ColecoVision RAM to 32KB, doubles the system's sound capabilities—which were its Achilles heel—with four additional sound channels, and allows the player to enjoy titles that were previously exclusive to Japanese computers of the MSX series. The games, which are part of the Opcode Games catalogue, are enhanced versions of their ColecoVision counterparts, such as Zaxxon, Buck Rogers, and Donkey Kong Arcade. The games can be purchased on Opcode Games' website as well as on the AtariAge website, which enjoys an exclusive distribution deal.

This list would not be complete without relating another memory of the ColecoVision. Willie Culver started the Coleco Visions Podcast in November 2013, delivering a monthly episode ever since. This broadcast provides the occasion for them to talk about their favorite ColecoVision games while also revealing forthcoming homebrew products to the audience. At other times, the hosts even welcome guests, such as Chris Cardillo from Coleco or Jean-François Dupuis from Collector-Vision Games.

For the time being, it appears as though Coleco will be turning its attention to the 'mini - arcade' games that brought them much success in the 80's.

But this time, Coleco has taken the approach of actively communicating with the gaming community and has set up a Facebook page where fans and enthusiasts can go to express their opinions on products that are in development. This allows fans to know exactly where Coleco stands in its development process and gather instant feedback. Following the blogs and posts on the site, one can see that Coleco intends on producing a series of mini-arcade games each with a featured game for the device along with a few other bonus games on each machine. At the time that this book was published, Coleco has been in negotiations with a number of companies in-

cluding their original flagship brand, Cabbage Patch, to license new or interesting brands on their devices.

This shows that throughout the years, against all of the obstacles facing them and despite the company's closure in 1989, Coleco still lives in the hearts of many people, whether it is because of their swimming pools, the early Telstar video games, handheld electronic games, the ColecoVision, or Cabbage Patch Kids. The history of this family company is also one of hope and perseverance, as it was founded in the midst of the Great Depression, when unemployment was sky high and optimism six feet under. On the other hand, its downward spiral, beginning in the early 1980s, can serve as a warning for many aspiring entrepreneurs that rushing products for early release, as was done with the Coleco Adam, is never a good way to reach a new audience.

The new version of the Super Game Module, the first official accessory for the ColecoVision since the early 1980s.



# VOICES FROM COLECO INDUSTRIES







# FRANK LAM

**Hi Frank, thanks for taking the time to answer our few questions. Can you introduce yourself to our readers?**

I'm Frank Lam, commercial illustrator and former artist at Coleco Industries. I started at Coleco in the Fall of 1982 shortly after graduating from Pratt Institute where I studied illustration, commercial art, drawing and painting. I worked at Coleco for a little over 2 years. Since leaving Coleco, I have held several artist positions in the video game industry: artist/ animator on NES and SNES games, illustrator of box art, 3D artist/animator, Art Director at two companies and Freelance Artist. And have been involved in games for several consoles over the years starting with The Colecovision thru the NES (Nintendo Entertainment System), SNES (Super Nintendo), Sega Genesis, Personal Computers, Nintendo's Game Boys, Microsoft's XBOXs and Sony's PlayStations.

**How and when did you arrive at Coleco?**

I graduated from college less than a year at that time; I was looking to at-

tain a position in an art department of either a book publisher or advertising company. I got a call from the agency I was signed up with about a company interested in talking to me about a full time art gig. I wasn't told at first who the company was until I agreed to go in for an interview. I was soon headed up to Connecticut where Coleco had its headquarters on Asylum Ave in the middle of Hartford. I had a good interview with Jennell Jaquays and David Johnson, not long after that I was hired, I moved up to Hartford and started work November 1982.

**Did you know what the company was working on at the time?**

I was aware that Coleco was coming out with the Colecovision through their "The Arcade Experience" TV and print campaigns throughout that year. Before that I had known about Coleco through their Electronic Head to Head Sports games and kids ride-on toys.

**What was your knowledge of video games at the time?**

I have been a video game enthusiast since Pong hit the New York arcades in the early '70s. Crowds gathered around the Pong machines in droves – it was something completely different from the pinball machines which dominated the arcades back in the day. I played video games all through my college years, in the college cafeteria, candy stores, laundromats and arcades of course. Legends such as Space

Invaders, Asteroids, Centipede, Tempest, Pac-Man, and Donkey Kong, dominated the arcades at the time. I was also a fan of the first cartridge based home arcade system the Atari VCS(2600) game console, at the time the cutting edge system on the market and the only cartridge based machine for the home. My friends and I played David Crane's Pitfall, Kaboom and Barnstorming among other Atari and Activision games. The graphics were pretty basic, but had a pureness about it that drew you in. Intellivision was also out at the time but I haven't had a chance to try it until I got to Coleco.

#### **What was your role in the company?**

I was hired as an Electronic Graphics Artist for ColecoVision games; essentially to design and create sprite (8x8 pixel movable tiles), animations and background screens (made up of 8x8 static tiles). Usually there would be a Game Designer, a Programmer and an Artist on each product. Of course there were some exceptions on larger games or when there were tight dead-

lines.

#### **How did an artist work in the early 80s?**

The industry was still in its infancy, there wasn't much of a blueprint to work off of. We worked somewhat traditionally to start with, roughing out everything with pencil on graph-paper (with each grid cell representing a pixel, the smallest element on a raster display), then finalizing with markers and colored pencils. We had letter sized graph-paper for character sprites, enemies and smaller moving objects or pick-ups. For backgrounds, we had huge sheets of graph-paper that represented full screens. Once this was done, they were then handed over to the programming to code into the system. During crunch times sometimes, we would hex code (convert the grid art to 1s and 0s) the art for them to save valuable programming time. Everything was made up of a limited set of tiles (256 I believe). So we had to be really creative in making our backgrounds and sprites in order not to blow the tile set limit. We also had to be careful not to have more than 4 sprites on a horizontal scan line; otherwise we would have an issue we referred to as "5th spriting". A concern where the fifth (or lowest priority sprite) will disappear or flicker (multiplex), until one of those sprites moves away from this horizontal convergence. Each sprite tile had only one color plus transparent, so for multiple colored characters, we would have to

design a "composite sprite" made up of several sprites. As you can see we were up against quite a bit of restrictions, but I believe it made us design more efficiently and resulted in visual short cuts that made the images convincing to the player. We came up with some very compelling looking games, in spite of the limitations we had.

#### **What were your tools at the time?**

We used traditional art tools, pencil, paper, markers and a light box (for tracing animation frames). For reference there was no such thing as screen capture; the closest thing would be a Polaroid instant camera, VHS camera and tape machine. When we sign a license they would roll the arcade machine in, install it in the game room or "The War Room" as some of us called it. The room held about 6 to 10 arcade machines that we were currently working on. We would shoot VHS videos of the games over the shoulder of whichever team member can play through the whole game the best. We would spend time examining the shot footage; take stills with the Polaroid; go back to our drawing tables and start sketching. If we know we signed a game but did not get the game ma-

chine in yet, we might head over to the local Mall or Arcade and do some "research" to get ahead of the "game" so to speak.

#### **Do you remember the games you worked on?**

2010, War Games, Frenzy, Congo Bongo, Burger Time and Looping. I also made a few smaller contributions on a couple of ADAM Super Games. I've also had a few games canceled on me after some false starts.

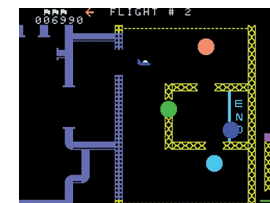
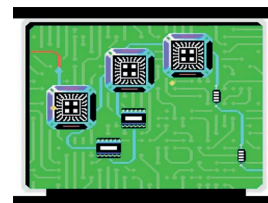
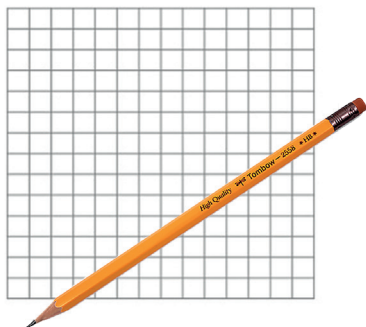
#### **Did you feel, at the time, that it would be the commercial flop it eventually became?**

I was focused on creating the art for Colecovision and ADAM and did not think too much about whether ADAM would be a success or a failure. Of course we all hoped it would be groundbreaking.

#### **What was your knowledge as well as your team's knowledge about the competition?**

There was no internet at that time; we followed what was going on in the games industry as best as we can from trade magazines or through word of mouth from other professionals in the

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dustry. David and Jennell would fill us in on what's happening and upcoming from trade shows and conventions.

**In your opinion, was there any consequence for Coleco as being on the East Coast, whereas most of your competition was located on the West Coast?**

I guess we may have suffered to some degree by not being in Silicon Valley, or the Northwest. Although, we may have benefited from MIT's talent pool just up Route 95 from us.

**What was your relationship with your co-workers?**

As with most work places, we occasionally hung out after work (pay-

days and dinners) sometimes on the weekends. The game designers would occasionally hold role playing gaming sessions on the weekends.

**What was the atmosphere at Coleco ARD?**

I felt it was an extremely creative environment thanks in no small part to Jennell, David and Eric Bromley of course. We were afforded quite a bit of creative freedom within our department; they understood that in order for the department to thrive as a studio, we needed synergy between the ARD teams. When we finally got our own cubicles, we immediately started customizing them, putting up posters, decorations, action figures or whatever

er to personalize the new sterile cubes. Some of us started making "doors" out of cardboard or foam core. This gave each cubicle its distinct personality. When the executives came by with clients, the "doors" became a good icebreaker.

**What was your best memory from that time at Coleco?**

There are many, but one of my fondest memories is the impromptu brainstorming sessions that could occur at any time. When a team member (artist or game designer) was stuck finding a solution to a frustrating problem, a voice from over the cubicle wall might suggest a solution, someone would shout out something else and before you know it, we were gathered in a cluster, debating thoughts and ideas. It was this synergistic way of working which nurtured the comradery amongst our ARD team members. And where else would you be able at any time to visit the game room as part of your job? One couldn't ask for a better start to a professional career.

**On the contrary, do you recall a particularly difficult moment?**

It was the morning after the New Year's holiday break in 1985, we all just arrived to work not too long, still milling about, talking amongst ourselves when all of ARD were called to the conference room in the executive wing. That was when we were told most of the ARD will be let go, effective immedi-

ately. Only a skeleton crew was to be kept on to wrap up current projects. We all didn't know what to say, it was a dark day for ARD and Coleco.

**Could you have foreseen what happened to the company?**

Not really; it felt like we were just getting started. Colecovision games were doing well, and we had just released the ADAM. When we heard it wasn't doing well, we thought we would just ride out the wave, unfortunately it wasn't to be. This coinciding with the waning of the game industry at the time, I guess Coleco just couldn't bounce back.

**What did you do afterwards?**

Subsequently, David Johnson informed me that Coleco's industrial design department needed some help on their Sectaurs toy line. I worked on designing weapons and accessories for characters, a playset and a new character to be added to the line. I did that for a few months on and off; unfortunately the line was canceled before it was to go into production. Not long after that, I moved back to NYC to work for Wicat  
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tems, an educational computer company, as an Art Director. I also, over time, freelanced for several game companies in the NY Tri-State area, which included working with Viewmaster-Ideal on their InteractiveVision, a short lived game system using the same Z80 TI chipset as the Colecovision. Shortly after that, I worked on several NES and SNES games for Absolute Entertainment including Ren and Stimpy's Buckeroos, Tim Allen's Home Improvement:Power Tool Pursuit, Casper, David Crane's Amazing Tennis, among others. I also Illustrated Box art, designed characters and did concept work for two of Scholastic Inc's Clifford the Big Red Dog CD Rom games. After that, I worked at Majesco Games as Artist and then as Art Director for ten years – and have been involved in the development of games such as Jaws Unleashed, The BloodRayne series, Teen Titans, The Darkness, Battlebots, Cartoon Network and many others.





# LAWRENCE SCHICK

**Hi Lawrence, thanks for taking the time to answer our few questions. Can you introduce yourself to our readers?**

I'm a long-time professional game designer and writer, primarily associated with role-playing games, though I have worked on my share of action games as well. I was one of the first "paper-game" designers to make the leap to video games when I joined the ARD team at Coleco in 1982. I was the executive in charge of all online games at AOL 1995-1999, and I'm still in game design: I'm currently on staff at ZeniMax Online Studios as the "Loremaster" and a lead writer for "The Elder Scrolls Online."

**What did you study prior to Coleco?**

At Kent State University in Ohio in the mid-1970s I majored in Journalism, then switched to English and then to General Studies, because I couldn't get enough math and science in Liberal Arts. But what I mostly studied in college was how to design and run role-playing games, primarily Dungeons & Dragons. In 1979 I got a job as a game designer with TSR Hobbies,

at that time the publisher of Dungeons & Dragons, and went on from there.

**Before working at Coleco, you worked at TSR. Were you a pen and paper role player during your childhood?**

Very much so. I started playing war-games at age 10 with Avalon Hill's "Gettysburg," and began playing Dungeons & Dragons shortly after it was first released in 1974. D&D combined my interest in games and rules with my other major interest, storytelling.

**What was the role of a game designer in the pen and paper role playing game business?**

I filled many roles: game designer, writer, developer, editor, print buyer, and for a while I was head of the design studio. You had to have a knowledge of how games worked, how to write and edit, and how to prepare a product for printing.

**How and when did you arrive at Coleco?**

When I was at TSR I had worked with Jennell Jaquays as I edited the "Deities & Demigods" rulebook, so we knew each other. She was aware that I had left TSR at the time she was recruiting designers for Coleco, so she invited me to apply. I started there in early 1982.

**What was your knowledge of video games at the time?**

I had played a number of coin-operated arcade games, so I was fair-

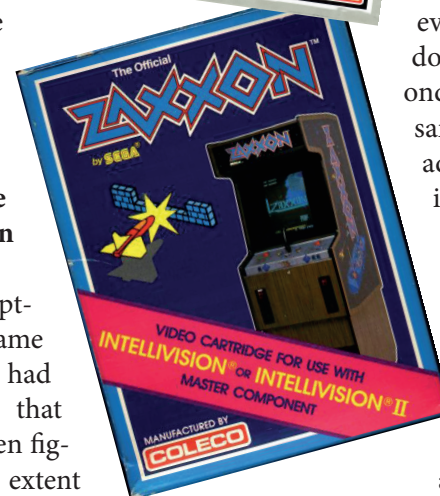
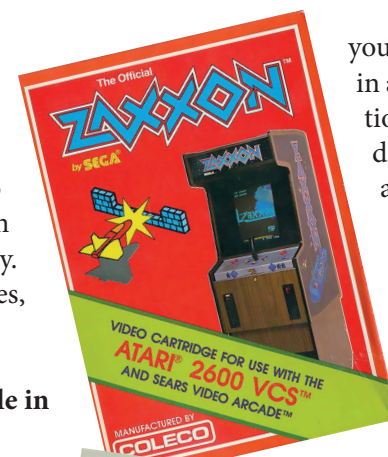
ly familiar with those, but hadn't really played on the Atari or other consoles. I had to get up to speed on those pretty quickly. But games are games, so I caught on fast.

**What was your role in the company?**

I headed up small teams developing cartridge games for the ColecoVision, Atari 2600, and Intellivision, creating the design documents and overseeing the implementation of, usually, several titles at a time. Most of our cartridges were adaptations of coin-op arcade games, but we did design a few originals.

**How did a game designer work in the early 80s?**

If you were adapting an arcade game to a console, you had to analyze how that game worked, then figure out to what extent



you could replicate it within a given console's limitations. We were given no documentation from the arcade companies, just the game, so you had to figure out what they'd done based on how it played and then reverse-engineer it.

**What were your tools at the time?**

Analysis, description, and diagrams. I would create a design document for each game that described in exhaustive detail how it was controlled, what happened on every level, how the AI routines worked, and the timing of how everything moved, down to the millisecond. We followed the same process for both adaptations and original games.

**Which games did you work on?**

I worked on a whole bunch of arcade and computer adaptations, includ-

ing “Zaxxon” (five different versions for different platforms), “Venture,” “Cosmic Avenger,” “Mr. Do!,” “Choplifter!,” and others. I designed three original games: “Smurf Rescue” (co-designed with Jennell Jaquays), “Tarzan,” and “The Dukes of Hazzard.”

**In your opinion, was there any consequence for Coleco as being on the East Coast, whereas most of your competition was located on the West Coast?**

I don’t actually think it made much of a difference. Coleco’s home office was on the East Coast, but only a few of the games were actually built in house—we employed developers from across the country, including the West Coast, as well as Asia, so we had a good grasp of what was going on in the industry.

**According to you what were the strengths and weaknesses of Coleco?** Coleco was one of the first (if not THE first) studios to adopt a team approach of de-

signer-artist-composer-programmer(s), which enabled team design and quick development; a clear understanding of what the market wanted in 1982/83, and how to give it to them; good marketing department with experience in the mass-market toy business.

However, the ARD management lacked a clear understanding of technical hardware limitations, and (after initial success with Coleco-Vision) began over-promising ever bigger successor products; executives had no experience managing technical and creative personnel, and burned out or drove away some of their most productive and most talented people.

**What was your rela-**

**tionship with your co-workers?**

By and large, we got along really well with each other. We were all young, energetic, bright, and excited by what we were doing.

**What was the atmosphere at Coleco ARD?**

Upward relationship with managers and upper executives was less congenial. Management was under a lot of pressure to produce a large number of titles quickly and on a tight budget. Any employee who tried to report problems or advocate for more realistic development time frames could face verbal abuse.

**What was your best memory from that time at Coleco?**

Those first few weeks, working on “Smurf Rescue,” realizing that the knowledge and tools I had for working on paper games were directly applicable to video game development—and that, in fact, they could be used to make video games BETTER. The opportunity for that didn’t really come until after I’d left Coleco, but in discovering that I had a skill set with broad application to interactive entertainment was a heady realization. I was going to have a career!

**On the contrary, do you recall a particularly difficult moment?**

I certainly didn’t enjoy getting yelled at by Eric Bromley when I was just trying to help him get the products built that he’d promised management

we would create.

**When and why did you leave Coleco?**

I left in 1984, after it became clear that I’d learned what I could from the experience, and was just repeating myself making the same development decisions over and over again. And with the Adam, the stakes for the company were much higher, the managers tightened the screws on the developers, and the work environment became more stressful.

**What did you do afterwards?**

I freelanced for a couple of years, partnering with Michael Price and Tom Fulton, who had also been on the ARD team. At the beginning of 1987 I took a job as a game designer and project manager at MicroProse Software in Maryland. Over the last twenty years I’ve worked for five other studios, including ZeniMax Online Studios where I work right now.







# DEBRA LAZARUS

**Hi Debra, thanks for taking the time to answer our few questions. Can you introduce yourself to our readers?**

My name is Debra Lazarus, I live in southern California with my husband, and we have a son. I grew up around nature, loved playing outdoors and came to value simple, natural things. My father was a tool and die maker, designing and manufacturing precision machine parts at his small company. There were several drafting tables in his office and it intrigued me as a young person that he was always drawing for his work. I have many art related interests, admire the expression of creativity in multiple ways, and enjoy exploring ideas and new concepts which led to my interest in computer graphics.

**What did you study prior to Coleco?**

I have an Associate of Science in Retail Management / Fashion Design, and then completed a degree in Graphic Design at the Colorado Institute of Art.

**Did you work elsewhere prior to joining Coleco?**

After I graduated, I worked for a local design firm and small book publisher, doing traditional graphic design, such as design logos, render marker compositions, layouts, mock-ups, some illustration, type specification and prepare mechanical art for print. But I became very interested in computer graphics and special effects, a new field at the time.

I was fortunate to find a position and trained as a computer animator at Computer Image Corporation. They developed two large analog computer animation systems, Scanimate and CAESAR [CAESAR = Computer Animated Events with Single Axis Rotation]. I was hired to learn CAESAR, a more sophisticated system because it allowed separate graphics to be placed on a screen and controlled individually. An image could be built and saved as a key frame, and CAESAR could compute between the key frames, known as tweening today. Scanimate's work could not be saved the same way because it was real time, where recipes were kept in a notebook for various cord patching to achieve a desired effect. Original artwork was scanned in with a camera, and basically, manipulated to create graphics and special effects for television programs and commercials, requiring a team effort – examples are zooming, glowing, spinning logos, and grids moving into the horizon. The systems were difficult to learn, using dials, plugs and cords, an engineering background would have

been beneficial.

### How and when did you arrive at Coleco?

In May 1983, we moved from Colorado to Connecticut. I was looking for a job and saw an ad in the Hartford Courant newspaper for an Electronic Graphic Designer at Coleco. I scheduled an interview and met with Dave Johnson, Art Director of Video Graphics. He liked my portfolio. I was asked to meet George Kiss, Director of ARD, and then Dave hired me. Coleco was at its peak!

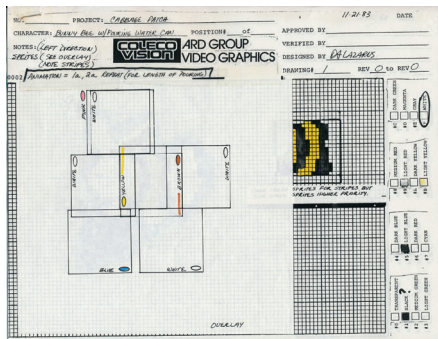
### Did you know what the company was working on at the time?

I remember seeing Rocky and Tarzan, but there were so many other game projects happening. The ADAM computer was still being tweaked. Cabbage Patch was enormously successful. It was a very exciting environment.

### What was your role in the company?

I was an artist with the title, Electronic Graphic Designer, in the Video

Graphics Department of Advanced Research & Development (ARD). I designed graphics and animation used in video games and educational software for the ColecoVision video game console and the ADAM Family Computer System. I also created storyboards, game simulation boards and marker renditions for product presentations.



Products were typically based on a license. All artists in this department strived to make those graphics have characteristics of and look like the characters of that license.

Because I was hired at Coleco's peak, I had to learn their processes and began by taking over and completing graphics on existing projects, which allowed that artist to work on another one. Working on educational software being developed for the ADAM Computer was a different focus from arcade themed video games. Coleco acquired major children's licenses such as Dr. Seuss, Richard Scarry, Berenstain Bears and Cabbage Patch Kids, leading to unique games for children, some inspired from picture books.

### How did an artist work in the early 80s?

When assigned a project, ARD artists

would generally consult with game designers, computer programmers, technical writers, and sometimes specialists, such as music and sound effects experts (musicians). We even had a staff child psychologist who came from Children's Television Workshop.

An artist would begin by making drawings of images needed to portray the story elements in the game. Then those drawings were adapted to pixels using ARD custom graph paper that correlated to pixels on a screen (256 x 192 pixels). The pixel graphics were composed from pattern blocks of pixels on the graph paper (32 x 24 pattern blocks on a pattern plane); each pattern block was 8 by 8 pixels (64 pixels in a square) and had a maximum allowance of 2 colors (or 1 color and transparent). We would color the pixel graphics with watercolor markers on the graph paper, indicating the color on the provided checklist. There were 16 colors (or 15 colors and transparent).

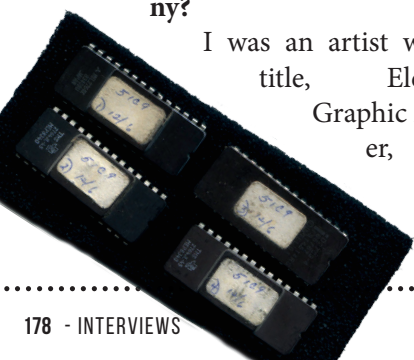
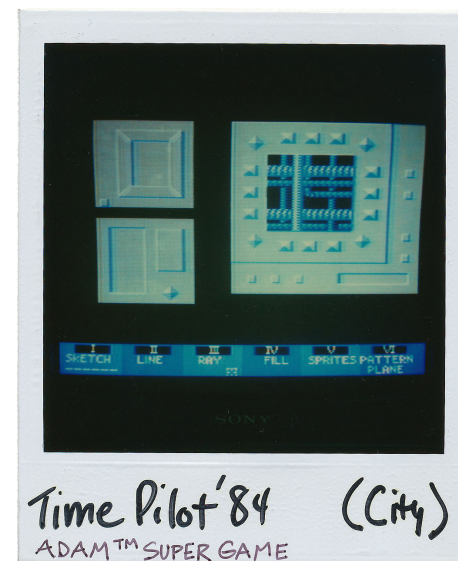
Aside from having blocky pixels, there was a limited number of pattern blocks that could be used due to memory restrictions; therefore, an artist was challenged to design pattern blocks so they could be reused throughout the game to create the art.

We designed both background art and sprites that moved independently over the background or pattern

plane. Some sprites had a loop frame animation sequence (e.g., 1, 2, repeat). The animation sequence, colors to be used, and a description of the action (e.g., walking to right, hovering, pouring) would be indicated on the graph paper.

Some sprites were made up of multiple sprites layered over one another. I would include an overlay attached to the graph paper, distinguishing the sprites from each other, but also showing how the sprites were connected, then indicate their priority level.

We tested loop animation using a VHS camcorder that we shared with the game designers. Our pencil sketches, or the pixel graphics (drawn on the graph paper), were placed on an easel and we'd shoot a few seconds of each







frame with the camera, in the desired frame animation sequence. Then we'd rewind the tape, play it in fast-forward mode in the tape player to see if the animation worked.

After the graphics were completed and approved, a computer programmer would calculate and enter code from the pattern blocks on the graph paper into the game's program.

### What were your tools at the time?

We used paper, pencils, watercolor markers, ARD custom graph paper, a photo copy machine, VHS camcorder, VHS tape player and a Polaroid camera for easy screen shots. We also had books for reference.

Later on, each artist was given an ADAM computer and a monitor. We started using a simple paint program stored on eproms, allowing us to create pattern block graphics directly on screen. I don't recall who designed it. You'd insert it into the game cartridge slot of the ADAM computer

and, if I remember correctly, we used a game controller to select and navigate graphics on screen. It was updated every few weeks. It was great to see graphics immediately, rather than waiting for them to be programmed.

### What made Coleco a successful company on some points but not on others?

They were a toy company and had good products. But based on some of their decisions regarding the ADAM computer, they seemed to underestimate the complexity and cost of making a high quality personal computer and the investment needed to be successful in that business long term.

### What was your relationship with your co-workers?

My co-workers were super friendly and went out of their way to help me out as a newcomer. I was able to work closely with a few artists in my time there. Our Art Director, Dave Johnson, had a background in computer graphics, and he related so well to personal computers. I feel he had vision and insight that made a difference regarding the quality of our output and reputation. He oversaw and could spot potential in the art itself, and recognized an artist's capabilities and skills. He was very encouraging.

The game designers whom I had the chance to work with were great. I never worked with game designers before and came to realize the importance

and value of their skills and experience – calculating tedious steps, procedure and levels, while still keeping it challenging and fun. Many came from TSR (Dungeons & Dragons) and it was great fun to visit their area because they had arcade games in there. They really had to practice playing, even if it wasn't a game they were developing, just to be in the gaming frame of mind. Jennell was very much a dedicated leader, devoting a lot of time overseeing projects and representing their work.

### What was the atmosphere at Coleco ARD?

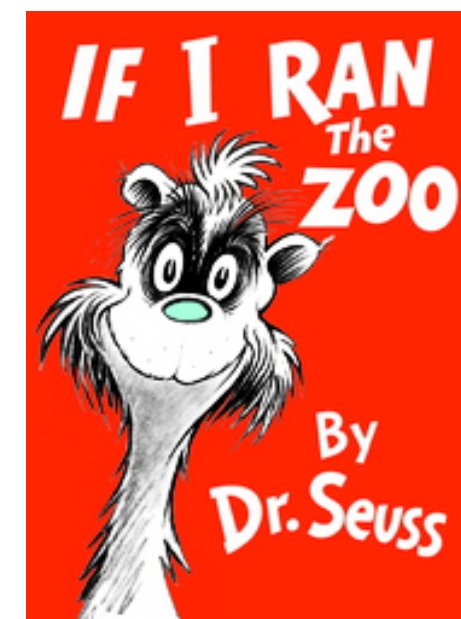
It was a fun, creative environment. I never worked in an atmosphere like that before and haven't really done so since. Maybe it was related to the fun factor of gaming, but I also feel it related to the variety of expertise and collaborating, our working together, I was always learning something interesting to me. Plus, as a team, we created finished products which I think contributed to a feeling of shared satisfaction.

### What was your best memory from that time at Coleco?

I have many wonderful memories at Coleco, but one in particular was the rare opportunity to make a storyboard presentation of an ADAM product called "If I Ran the Band" inspired from a musical band in the picture book "If I Ran the Zoo" by Dr. Seuss. The concept allowed a user to

"conduct" the band and create a song or melody by making individual Dr. Seuss characters "play" their musical instruments – using loop animation and music sounds.

A member of Coleco's marketing department traveled to California with the presentation and met with Theodor Seuss Geisel at his lighthouse home. Geisel loved the arched structure that his characters would stand on. But he wasn't pleased when he saw his musician characters taken from different books, appearing together – he said we couldn't do that. Of course, this was just a concept so he could grasp how the user would interact with the game. "If I Ran the Band" was developed further with his approval, but it was never completed



and released. This product concept is interestingly similar to children's interactive apps today.

**On the contrary, do you recall a particularly difficult moment?**

I would say it was the first round of layoffs – sudden and unexpected. We expected some reorganization to happen, but not this way. One day a small group of people walked into our area, and announced they were very sorry but they had to let some of us go. They read aloud a list of names, and everyone whose name was mentioned, had 30 minutes to collect their things and leave the building.

**When and why did you leave or had to leave Coleco?**

In June 1985 they dissolved the department, the remaining ARD staff were let go and that included me.

**What did you do afterwards?**

There weren't many video game jobs in Connecticut, many people moved out of state. I remained in Connecticut and appreciated spending time with my young son. I was able to free lance as a Computer Graphic Designer through George Kiss from Coleco, at IbiDinc in Hartford, designing graphics and animation for the Commodore 64 and the Apple computer. I also consulted with Coleco game designer, Michael Price, at his company, Daedalus Design Group, for a major entertainment facility and an amusement park ride for LaserGames International, Ltd.

I began to focus on my personal art, painting and sculpture (as I still do) in addition to working at a design firm in Farmington, a local television station, and then ESPN Sports – doing on-air graphics. I've more recently worked with storybook

apps for children, adapting a book of mine – the experience reminding me of Coleco projects, working with sprites and animation.

**What do you think of the video game industry evolution?**

It's amazing to compare how we worked then to now. Exponential growth of computer technology and access to the internet makes for some complex gaming these days – a huge leap from ColecoVision.

Aside from the ability to play games on a small device, I've read how some games are very sophisticated and difficult to learn, that attracting new gamers to play them is a challenge. But there will always be a specific audience for a product – just like there's one for retro-gaming.

I recently watched an online interview from the Smithsonian's 2012 The Art of Video Games exhibition, with Jenova Chen, designer of "Flowers" when he describes how he grew up in the urban environment of Shanghai and never saw "green" fields until he came to California and saw the farms, so he created a game to have the interactive experience with grass in the fields. What a beautiful motivation. That's making technology work for you.







# MICHAEL PRICE

## How did you end up in Coleco from TSR?

My role evolved and switched a couple of times at TSR. About a year and half after I was there, TSR was looking to try to break into the early computer game industry. It was very much still emerging at that point because the TRS 80 was the big computer on the PC site and Apple was just starting to make really big inroad with the Apple IIc. TSR decided to have me start off doing a lot of research on the computer games department primarily because I had done a fair amount of programming in my undergraduate and graduate times even though I didn't know much about how to do graphics programming. About nine months to almost a year into it, I realized we needed more people so we hired Bruce Nesmith and several other people and they were the ones who really took a lot of the early concepts and made early products for TSR. After that really started going and I became the Manager of Acquisition.

In mid-late 1983, TSR went through a number of contraction where people were laid off, unfortunately I was one of those and Lawrence Schick, who

had hired me at TSR, was already at Coleco and we had stayed in contact with each other. Before I left TSR he had contacted me several times and thought that I might like getting into video games since he knew I had started the computer games department at TSR. I wasn't sure about it as video and computer games were still really brand new.

Late in the fall of 1983, I finally relented and they brought me in so I moved to Connecticut and started my stay at Coleco.

## Did you know what you were going to do?

Yes, in a broad sense. A lot of what they explained to me, of what they were doing, was taking some of the Classic Arcade Games and translating them to the ColecoVision Console and when I got there, I also found out that they were working on the Adam computer and they were rolling out a lot of games, kind of a super-sized version of the ColecoVision counterpart to put on the Adam and so I ended up working on them as well. They were coming up with some new titles but they were leveraging the height of the arcade craze at that point. With all the arcade games that were so popular at that time, you could now play them at home.

On the other hand, I had no idea, they had explained it to me but I had no clue





arcade and other things.

So a lot of the job was to translate what the arcade could do into what the ColecoVision or the Adam could do and

or the Adam could do and

then to do it in the best way to replicate that; to show it even better if we could. The tricky part with a lot of these was that we were dealing with a lot of licences so we didn't have free reign in what we could do to make something better, it had to pass licensing approval.

#### What were your tools at the time?

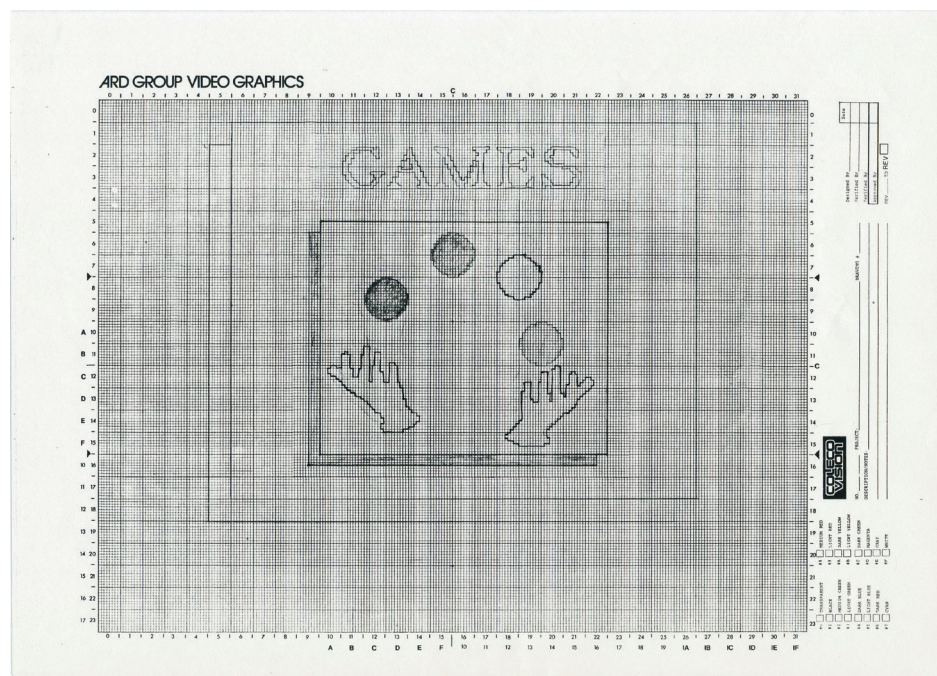
The tools we had were word processors for our documentation, some simple bitmapping tools, pixel creation tools for the screens. If I remember, we had 16 colors to play with in the standard Coleco, 8 light colors and 8 equivalent dark colors. Basically, we gridded out everything and the artist, when we were doing an animation screen, had to know if it was only going left to right or if we were doing diagonals and so on. We basically had pixel animation tools and it was pretty rudimentary stuff. Most of the games until near the end, were 4K modules. We had 4K to fit the whole game into so the programmers were doing really basic machine language programming to fit the graphics in, the game coding, the music and they were programming to the machine, to the

hardware. It was really a cool environment though.

#### In your opinion, what were the strengths and weaknesses of Coleco as a company?

This is more my understanding in retrospect, after having talked to some people and also talking to some of the Coleco higher ups how they knew Atari and some of the other companies were working. My understanding was, Coleco was a big unique company in that there was a separate game design area in the company that weren't directly programmers, and this is second-hand and also in retrospect, so

I didn't know this at that time but at some of the other companies the programmers were the designers. Because so much of what could be done had to be done on a machine language basis, it wasn't like the designers could code in Java or something like that, you didn't have translation programs like you have today that can take care of things. My understanding of one of the unique things at Coleco was that we had designers who were working with the programmers and that made for some good strengths of the company and some of the good products we came out with.





### Did you feel that the end was coming?

Yes and it was really, we definitely knew. There started to be, I don't know how many lay offs. If I remember right, at the peak there was around 125-135 people in the advanced research department and in mid-1985 when we closed down in July of 1985, I think. I was one of the last dozen or 15-20 of us that were still there, so it shrunk down from a large to a small group. In fact, because we were so heavy on paper and pencil designers, we talked amongst ourselves when we saw the company starting to shrink, the R&D arm started to shrink. Myself, Dave, Ritchie, Jennell and the others involved came up with our own proposal to Coleco for them to start a classic board game part of the company. We pitched the idea, we did some market research and they were pretty impressed but they decided to close the R&D of ColecoVision. We were a little upset but we felt vindicated because about six months to a year after they ended up buying Selchow and Righter and Trivial Pursuit. We knew they had liked what we had shown them because buying Selchow & Righter was our vindication that we had given them something valuable but we were pissed that we didn't get a chance to save our butts and continue on. There were really



a lot of designers who had gone on to very good careers within the game industry. That happens, you don't appreciate the people you have onboard but you always appreciate the people who are outside of your circle I guess.

The other funny thing was, that about a year after I left, I got a call because I was good friends with some of the people in the marketing department, and they wanted a designer to come in and work with them to develop the talking cabbage patch doll. They ended up hiring me as an outside designer to work on the talking Cabbage Patch Doll. It was really funny, people that I had been in meetings with before who probably never gave me the time of day, were dealing with me as an outside designer. It's really weird sometimes how things work out. I managed to do that and it was the last Coleco project I ever did.

### Can you tell us more about your work on the cabbage patch dolls?

They wanted to create a smart doll. They wanted to add technology that would allow little kids to interact with the doll, and beyond that. They wanted to know if several kids brought several cabbage patch dolls within range of each other if the Cabbage Patch Dolls could interact with each other. What

we ended up doing was looking at the available hardware in terms of capabilities. The doll had a positional sensor so it could know if it was upright or lying down, face up or down. It had a radio frequency emitter and detector to know if a doll was within range. You could do things, it had a pacifier, when you put it in its mouth it would make sucking sounds.

We had to come up with the specs and as the outside designer I was working with the internal team to come up with the ideas for the dialogue of the dolls, the conditions under which it would say it. We had to say, if the doll was upright and you squeezed its stomach or put the pacifier in it, what it would do if it was lying down, if you put the doll face down, if it would cry and things like that. We had to come up with all the routines. It was like a rudimentary AI, as the doll experienced the environment, based on its sensors, what it would do and could also communicate with other dolls. I think the doll communication was a little creepy to some of the parents because it was almost like the Chucky Effect, the doll was alive.

We talked about some perverse ideas like having the eyes of the doll glow red in the dark. Whenever you design things you always come up with weird ideas, I think it's part of the creative process. That was an interesting project. It was one I wasn't sure I was going to do or not because I still had a bit of ambivalence about working for Coleco but it was something new and

I love working on new things, so I relented and I'm glad I did it.

### Did you understand that the crave and the craze for the cabbage patch was not going to last?

Well, something like that. It didn't last to the degree it started at. I think that the hope was that it was going to be like some of the traditional toys and games out there like Monopoly or Risk or G.I Joe or Barbie, that it's a craze but hopefully once it settles down it becomes a perpetual Christmas Item. I think it was the long term goal, but there was no way it could sustain the craze it had in 1984 when things were just insane.

### What was your relationship with your coworkers?

I felt that my time at Coleco was wonderful even though I stepped into a job that I didn't really appreciate. All that I would have to do there again, I felt, from the very first day a very good camaraderie there. The designers, the artists, the programmers were all really professional, and friendly. We would do stuff together. It's really funny because working in that environment is so different than doing game develop-



doll



ment  
now.  
If you're  
working  
on a fairly  
sizable title  
you're lucky to start

and end something in under a year and then we were juggling multiples, probably dozens of titles at any one time and each one of us were in charge of a handful of designs at one time and we were backups for each other, we play tested for each other, it was not uncommon to be having pizza and pulling all nighters on a regular basis. Three to six months was a pretty standard amount of time to get the smaller titles out and longer titles a bit longer. Things moved at a much faster pace.

**Did you feel that there was a clear distinction between your part in the advanced research and development team and the other people, especially the executives?**

Jennell Jaquays was really our go between for most of what we did versus what the executives wanted. And so, we would have meetings and team meetings often times with a few of the executives but I think they didn't get us and I'm not saying we didn't get them but games were an oddity or I should say video games were an oddity for them. They got toys and traditional games much easier than

what we were doing partly because it was such a new thing and I think they saw it as a flash in a pan and it's going to be done with. It's just hot right now, we'll make money and we'll be done with it, I don't think they saw it as a long lasting thing and the reason is music CD was coming out and almost immediately, the designers and programmers understood that it could be a medium for delivering and creating game content. The executives did not, could not even envision that, they didn't even understand where we were coming from. Again, it was a brand new emerging technology and they thought we were talking 20 years down the road or something like that, I don't know. They just didn't get it but we had a really smart team there, we all got it and we all saw it and thought: Oh my god, digital content, it could be an avenue for creating games. It's not there yet but we could see it happening and all you needed was to have some kind of smart mechanism that could read data versus just reading the mechanism for creating sound.

**When did you leave Coleco?**

I don't remember the exact date. I remember R&D closed in July of 1985 more or less a month or two. I remember Jennell, Myself and a handful of other people were left and we basically closed, we were the last ones to close the doors. I remember there was about a dozen to 20 of us at the very end who were the last ones there.

It's tough seeing that kind of contraction and knowing that you're working or have been working with such a high caliber of people and see that dissipate without a chance to try a make a go of it somehow. Coleco was still making money. They were making so much money, I don't know if they made a billion dollars that year but it was some insane amount of money. They were profiting tens of millions of dollars, they were still making good money with Coleco but it wasn't at the level they had been making a year before. I think they just cut their losses early thinking they'll ride the wave of cabbage patch and anything ancillary to that because they understood traditional toys better.

**What did you do after leaving Coleco?**

Myself and a couple ex-Coleco designers did a very loose design team where we did independent projects but it didn't last very long. Lawrence Schick went to work for Microprose. I also got a job offer at Microprose after Lawrence was there but I decided I didn't want to do that so I turned it down. I worked on the talking Cabbage Patch Doll. I did an interactive TSR book, one of those pick a path book for TSR. Then I ended up working primarily in the location based entertainment industry for about 5-6 years. With one of my contacts at Coleco I got hooked up with a small company that had

rights to an interactive laser technology and I worked location based entertainment ideas. The kind of things you would see at Disney World like Dark Rides and things like that, very similar to laser tag but with the lasers you can send out encoded beams. We designed a few interactive projects where one was a dark ride where you could either be a Wizard, a Warrior, a Thief or an Elf; and each one of those people could shoot out their laser beam at a target and fight animatronic figures and things like that. I worked in that part of the industry for several years and at an annual trade show in 1993, I met a company that was at the forefront of virtual reality entertainment and was located in Louisville, Kentucky. They were doing virtual reality arcade systems that were going to go into location based entertainment centres and they had a Castle Wolfenstein VR and they had licensed a few early 3D video games that they were doing VR things for.

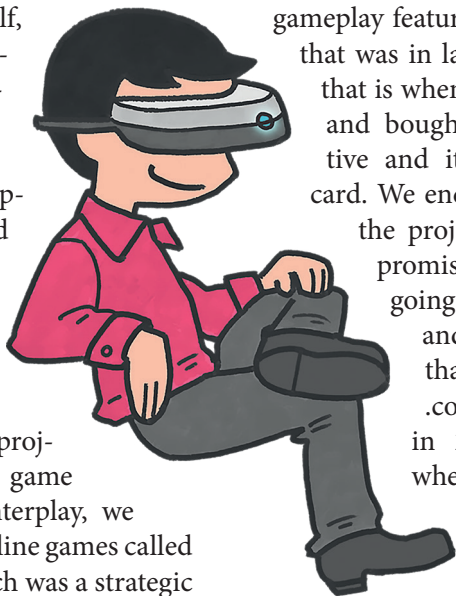
I had moved back to Wisconsin in the interim after I left Coleco and I wanted to work with this VR company in Louisville from a distance but they got new technology and wanted to hire me as their Development Director so

I ended

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up moving to Louisville Kentucky in late 1994 and I worked with them for a year, and we came out with a number of products. I worked with them on the Castle Wolfenstein VR. We were working on a number of other things, some new titles and then it just didn't work out, the two guys running the company were really hard to work for so myself, two of the programmers and one business guy left on our own and started our own game development company called Indigo Moon Productions which was a company that ran about 6 years. There, we did a couple of Interplay projects. A dragon dice game for TSR through, Interplay, we did one of the first online games called Fierce Harmony which was a strategic sword fighting game and we worked with Mattel. We showed a demo at one of the E3 of a Hot wheels online racing game. It got really good reviews at E3 but unfortunately 2 to 3 months later Mattel decided they weren't going to do any more video games internally but that they were going to do traditional games and toys. They canned the project and I was so disappointed because it was going to be a really cool game. It was based on the 1950s drag racing where you souped up your car and race each other, we had a great



interface, it was really cool. We had modeled different Hot Wheels cars, it was really a fun game. We had really good contacts at Hasbro and Interactive. We were on the verge of doing a 21st century version of some of the classic games. We had a classic Clue game for which we had proposed new things, new rules, new gameplay features that they loved, that was in late 2000. However, that is when Infogrames came and bought Hasbro Interactive and it upset the castle card. We ended up not getting the project despite all the promises that we were going to get the project and unfortunately that's when all the .com crash happened in 2001 and this is where being in Kentucky killed us because we just didn't have the relationships in California that we would have needed to land something else in the timeframe we needed and we just didn't have the funds to keep going so we had to close up shop. I did end up teaching for a few years in my spare time in an ITT school in Louisville, which had game design classes and I was working on some other online interactive things that didn't happen. There were a few experimental things I was trying out. I ended up doing a 3D environment for a rock and roll

band that ended up on their CD, it was sort of experimental but a cool project. Eventually I decided that I didn't want to do this full-time anymore so, in 2010, I made the active decision not to pursue any game development. But I did do some really small things here and there. I have mostly been concentrating on photography and digital art.

### **What was your most difficult moment at Coleco, if you have one?**

I would say, aside from the company contraction and losing my job there because they shut the whole thing down. From a personal career and emotional standpoint that was hard but from a purely working standpoint I would say the first two games I was assigned to ended up getting cancelled and that was the most difficult for me because I really liked them and I wanted to get the title out because being a new designer I wanted to get things I was working on out there. The first two games I did were Mr. Do's Castle and a hockey game on ColecoVision. Mr. Do's Castle got cancelled, I forget the reason why, and the hockey game they decided that hockey wasn't as hot a sport product as some of the other sports titles they were working on. Working on the designs, getting the documentation out, getting the art going, getting far into the project and realizing that marketing just cancelled the game, that for me was the most frustrating because I put a lot of time and effort into something and seeing the company contract and see people

lose their job and finally having to be part of shutting down the company wasn't fun.

One other thing that comes to mind. Part of this, was in the last 6-9 months, I had proposed, and I think with Dave Ritchie we had worked out the schematics for a laser tag game. I had specs of what the optics needed to be and we did some prototyping and I knew it was going to be a fun thing, that it was good and Coleco came back and said we can't do this because we're not going to do something that is a combat/war-like game, we're against doing anything like that. Myself and Dave Ritchie then came up with a brilliant idea to make it a futuristic sports game. It was a skill based game, you're not killing anybody. We had worked on a Tron theme. There was the Discs of Tron video arcade game that was out, so we thought, let's make this like a futuristic game in the 30th century so you're not killing anybody. It's just a sports game and kids love to run around and shoot at each other and you're not killing everybody. We had the sensor tag that we developed, the optics for the laser. We then created a great marketing plan and we pitched it and they said no, we're not going to do this. Lo and Behold, before we got canned and lost our job guess what license they got? They got the Rambo license and I know this is something I can't necessarily prove but one of the ex-marketing people... I'll give you the information but this is second

hand information. My understanding is that one of the marketing from Coleco ended up signing on with Worlds of Wonder and Worlds of Wonder came out with a laser tag game that had the marketing we had pitched to Coleco. I can't prove it but I'm 99.9% sure that all the good ideas we had designed and pitched to Coleco ended up in the hands of Worlds of Wonder, I can't say that any of the technical specs went to Worlds of Wonder but I'm 99.9% sure that our marketing pitch ended up at Worlds of wonder.

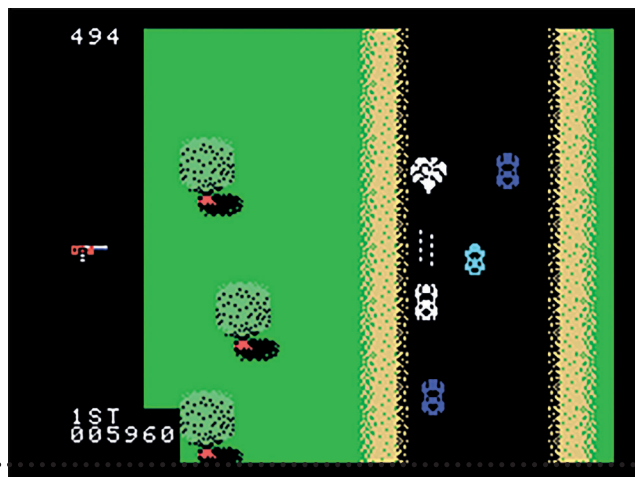
#### What was your best memory at Coleco?

I would say that my best memory was when I was lead designer on Spy Hunter and that was one of the very first 32K cartridges that Coleco did and I was really proud at how well it played,



sound-  
ed and  
looked like the arcade  
version and I would say my  
proudest moment was reading the re-  
views that said that our version was  
the best version of all the Spy Hunter  
versions.

If I had one proud moment that was  
it but my proudest moment overall  
was just how well, how proud I was  
of being part of an overall team that I  
felt was so top notch but for personal  
pride it was Spy Hunter.





# MICHELLE VAN SCHOUWEN

**Hi Michelle, can you introduce yourself to our readers?**

Hi, I'm Michelle van Schouwen and from 1981 to 1983 I was principal writer and editor for Coleco's Advanced Research and Development department.

**When and how did you arrive at Coleco?**

I was moving to the Hartford area at the time and I was looking around for jobs. I interviewed at a number of places, including Coleco. However, it looked like the company was going to be trouble in some way, so I wasn't sure that I was going to accept a job at Coleco, but they offered to double the salary that I had at my previous job.

**Were you aware of what Coleco was doing i.e. that they were making toys and video games, etc.?**

Absolutely. When I was considering accepting the job I said to the man who was to become my manager, Tom Helmer, "Oh, it would be so fun to work at a toy and game company," and

he said, "no, it's fun to tell people you work at a toy and game company."

**What was your role in the company?**

In advanced research and development our whole purpose was to think up, design in details, engineer, and then take the first steps towards producing games, and we were in the electronic game area. The first project that I worked on was tabletop Pac-Man, so this was prior to us doing video games for the console.

I headed up the writing group. At first, it was a writing group of one. By the time I left it was a writing group of five.

One of the most important initial jobs was to write a very detailed engineering document that would serve as a guide for the programmers developing the game. It would tell you step by step what happened. What would happen if Pac-Man intersected with another character, what would happen to make points, what would happen to move from how many lives you had remaining, how was the scoring accomplished, what did the graphics look like. All of this was in our engineering documents which we wrote, edited, revised, and wrote again. Sometimes we'd have two, three or four different versions before it was ready to go to the game design and development teams for the next steps.

**Were you working directly with the original materials of the arcade machines?**

Assuming that there was an arcade game, we would work directly with the arcade game, and so, part of the job was to play the games. Along with the game designers, we would play the games and really record them down to every detail, so we really had to understand how the games worked and exactly what was happening. So it takes a little bit of the fun out because it really makes it a science.

**Do you remember some of the details that were omitted of the tabletop version?**

Of course, between an arcade game and a tabletop game there were changes to be made. You're not going to replicate the entire experience. Our goal was to make an experience that was equally immersive.

The graphics were simpler. I know that the space we had allotted was limited and so we changed some of the patterns of movement.

**Which games did you work on?**

Among the games were tabletop Pac-Man and then we worked on tabletop Galaxian as well as the Frogger one. Then for the console systems, for Colecovision, Atari and Intellivision we created versions of games including, but not limited to, Donkey-Kong, Tur-



bo, another Pac-Man, and many others.

We also created the instruction manuals for all of the people who were going to play the games. Those were interesting because they were in plain, simple English and I think they were pretty good instructions that really had the logic of the games down so that a kid or an adult could easily play the game by following the instructions. So that was a very important job as well.

We also worked on the design parameters for the Colecovision as well as the Adam so it wasn't just the games as we were writing up specs. I was, for a while, known as the "Project Manager" for the failed Adam. Project Manager did not mean I was in charge, it

just meant that I had to run around and put together specs.

For the development of the Colecovision, my job started very early with competitive investigations into, particularly the Atari VCS and also the Intellivision systems to take a look at the features that they had and to work with the team to see how we could improve those features. So I did a lot of investigative work, talking to anyone who understood the inner workings of the Atari and Intellivision and made a lot of phone calls talking to people who probably told me more than they might have benefitted from telling me. And then, working with the team to document the engineering specifications that would create a Colecovision system that would be a stronger console than any of the competitive offerings.

**During this investigation time, were you calling as a Coleco employee or as someone else?**

[laughs] A little of both. I didn't always say I was a Coleco employee. Sometimes I was someone else. Sometimes I was a student.

**In your opinion, were there any consequences for Coleco being on the East Coast whereas most of the competition was located on the West Coast, like Atari, for example?**

I did not sense any negative impacts. We certainly flew in experts on a frequent basis but we were also close to

Boston which was a burgeoning hot-bed of technology then, and also close to New York which was a big center for the toys and games industry.

There may be others who will disagree with that, but I thought that we had some East Coast advantages and there was a lot of money in this business and so we flew people in and people flew out regularly.

**What can you tell us about development of the Adam computer?**

[laughs] Well, every Thursday at Coleco was computer development day. And the name of the computer at one point was 'CompuVision.' And if you will excuse my language we called every Thursday 'Compu-fucker Day.' [laughs]

My boss, Eric Bromley, and some

consultants worked closely with me because I was the Project Manager, which as I say was just a lot of responsibility and no authority what-so-ever. Eric Bromley, the consultants and the team would fight much of the day, arguing about features.

I remember one particular session where my boss and I were talking about differentiating two keyboard commands: move and copy. And I said, there has to be something that alerts the computer to the fact that copy and move are two different things because when you move something the original disappears. When you copy something it's in two places." Well, my boss wasn't having any of that and after a couple of minutes of discussion he called me an idiot and fired me. [laughs]

And so I went home and by the time I got home he called me and said, "Where the hell are you?" And I said, "Well, you fired me." And he says, "Come back." And I said, "well, I'll come back tomorrow." There it is an illustration of the emotional levels that were part of the development of the Adam computer.

Originally, Eric Bromley's vision for the computer was not bad. It was that it was a sort of a 'typewriter plus.' It was a word processor essentially. And it's almost like what you see now where they're developing these really simplified computers for seniors. And first, that was his vision, a computer anyone could use. And there was some argument for that because we had computer systems in our offices that no one could use. [laughs] And Eric Bromley called HP I think, that provided those computers, and he said, "Be here within an hour to pick up your computers or they're all going out the third story window".

His goal was to have a computer that didn't need to be thrown out of a third story window in frustration. Not a bad goal. We had a Lisa sitting in the office as an example of the higher end of what we wanted to achieve, so we wanted to be like Apple. But easier.

But I felt that when the Adam computer came out it was all gonna hit the fan. I was sure it was going to fail because I thought the design was poor.





Because I was in all the meetings, and I watched the project being dominated by Eric Bromley and a couple other executives who weren't listening to their highly paid consultants or anyone else. And that certainly included me. I had a lot of work to do, but I didn't have any authority, nor, frankly, did I know that much about computer design. But I could see that our consultants did, and we weren't doing a lot of the smart things we should have been doing. And I knew, before the computer came out, that it was going to flop. Sure as anything.

So I decided to warn my team members, because I did have team members by then, and I said, "you know, there are going to be some layoffs after this computer comes out. The only thing that may support us would be the Cabbage Patch dolls on the other side of the business and I don't think that'll work out". So, I decided that I would rather leave for an opportunity that presented itself to me because I was recruited by another company and I thought, "this is probably an opportunity I ought to take." And I stayed there two years and ever since then I've worked for myself because in truth, that experience and the subsequent one showed me that I was better off being my own boss.

**What were your relationships with your colleagues?**

I had a pretty good relationship with Eric Bromley who was a challenging individual and my boss but he did talk to me. However, that was also the person who fired me one day and then told me to come back. That was not unusual. I wasn't even worried when he fired me, I simply didn't care. Because I figured either he'd ask me to come back or I wouldn't and I didn't care at the end of the day.

Sometimes management was very difficult. I remember being yelled at by one of the Greenbergs, because I was talking with one of the middle managers in the hallway about a project and he came by—and I think it was the only time he ever spoke to me during my tenure at Coleco— and screamed, "Don't talk about business in the hallway!" We weren't by the front door. I wasn't talking in front of strangers. But, it was a lesson learned.

There weren't many women in positions like mine. I was for a long time the only woman in the department. I had one female programmer friend. But there was a bit of sexual harassment going on, not among my peers, but among the upper management. There were people you avoided. You didn't want to be alone in a room with some of them. There were people who would grab you as you would walk down the hall. They would reach out and grab at you.

I loved the team. I worked with a num-

ber of people who were just absolutely brilliant, fun, and many of whom I'm still friendly with. I thought it was just an amazing, bright, fascinating group of people. Both as in terms of game development and plain broad thinking. So it was a wonderful experience. Even the difficult parts of it—and there were many difficult parts of it— prepared me to pretty much run a business, and to do anything that I've done in the future because I could deal with just about anybody.

The first day that I worked at Coleco, we were supposed to leave at 5:30pm and I was still there at 7 o'clock and no sign that I would be leaving soon and my husband at the time called the office to ask me if I was okay. It turned out he was not permitted to talk to me. [laughs] This was 7 o'clock at night, right? Not permitted to talk to me and Eric Bromley's secretary said, "she's too busy to talk to you, don't worry, she'll explain everything", and then hung up. [laughs]

And some other days, all the executives mostly had Lincoln Town Cars, and sometimes they would block the driveway so you couldn't leave the parking lot. On purpose, I think. As far as I know, they never spoke to us, so how would we know? But it was 6:30 at night. Eric Bromley had a one-way intercom into our offices so he could talk, but we couldn't answer... So, about 6 o'clock at night—remember, I'm the only woman on the team

at the time—the intercom would scream, "where are my guys?! All of you guys get to my office!" And that included me.

There was a robust programming team and among them were my friends Mary Cahalane, Russ Avery, Zach Smith and a few others and they were working terribly, terribly hard on one game or another and they'd been up all night. They had a new manager who had come in from China and in the morning we would used to go to what we used to call the 'gutter dog truck' that had hot dogs and sausage and coffee and Coca Cola and french fries. It would come to the driveway for these poor programmers that had been working all night who stumbled out to get a cup of coffee and a snack. At that precise moment the manager from China posted a note and said, "anyone who go to coffee wagon will not be promoted." [laughs] Isn't that wonderful? It was kinda just one of those emblematic moments when you're thinking, "really?!" The programmers when he posted this were furious! Because they were hungry and exhausted and they're not even supposed to eat?



[laughs] That kinda gives you the flavour. Those were the sorts of mistakes that they made. And the joke at Coleco used to be, “I’m leaving to take a lower paying job.” [laughs] Because it was also less stressful.

Some days—even though the company had a lot of money—I remember coming in and it was freezing cold because they’d forgotten to pay for the oil, in the furnace. All in all it was a strange place.

**When and why did you leave Coleco? Did you want to start your own business right away?**

No. I took one job in the interim. I worked for two additional years. I worked for MassMutual Life Insurance Company as Associate Director of Product Development and Marketing, which was a pretty good job at that big company.

I didn’t think I could be working in an environment that was that stressful. It was a great experience, though. It’s an experience that I would not have missed.

As someone from the toy industry once said to me, “Hasbro is just Coleco in a Brooks Brothers suit”. And by this they meant that Coleco was kind of a hard scrabble, you know they were the guys in those polyester suits, scrabbling for whatever there was.

**If you had to choose, what would be**

**your best memory from your time at Coleco?**

Many of my best memories were working with the team. The sense of humour that they brought to everyday work. Lawrence Schick, for example, would bring us the word of the day. It once was an Italian word for a woman with a not too unattractive mustache.

There was just a lot of humour, I think that we got through some of the difficult times by being a team... it was almost like a bunch of kids with overly strict parents, or kids at a strict boarding school and the kids are having fun anyway despite it all. And that’s what it was because the development was mostly very young.

**And then on the contrary, do you recall a particularly difficult moment?**

Yes, I think every Thursday in the development of the Adam, or CompuVision as it was earlier called, was challenging and no one looked forward to going to work on Thursdays because I think that the executives thought that by screaming at everyone that they could make it a better product. And it didn’t work. [laughs] That wasn’t so good. [laughs]





# JENNELL JAQUAYS

## How did you join Coleco?

Someone I was working with—a designer by the name of Michael Stackpole—had ended up working on a temporary contract at Coleco to make a roleplaying game for one of the toy products they were trying to create—even though this product never came out—and they needed one more designer. He thought of me and that I was probably available and suggested that I interview with the company.

He and I worked together after being hired in November 1980 and were actually roommates for a while. He ended up leaving to go back to be a roleplay designer and a novelist, which was his goal, and I stayed with Coleco to become a game designer.

## Were you employed directly as a video game designer?

No, at that time it was just a game design consultant. We were creating a roleplaying game for a product. The intent of it was to combine two fairly new pieces of consumer technology: voice chips, where you used phonemes to create voices and barcode readers.

So we put together game ideas that used a pen plotter that could plot barcodes onto fairly large sheets of cardboard and we would use those as playing cards and run them through the barcode and the message that came out of the device would then say something. We were using it to roll dice so it just might say the number “9” or “move” or “go back.” So they were very very short simple phrases, just a couple of phonemes and we tried to make games that would make this device work. Ultimately, it went nowhere.

After that I stayed with the company as they offered me a full-time position in February 1981.

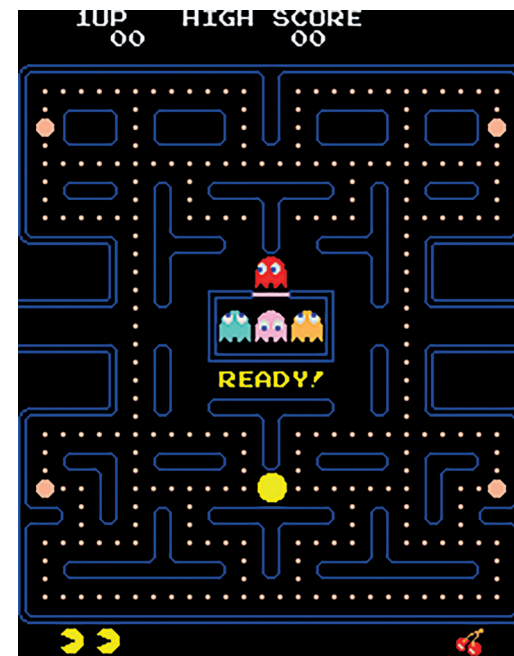
For the next six months or more we just worked on ideas for new game products. We brainstormed, we helped development with new projects that were already in process and eventually we started getting these ideas to work on the table top arcades. The first one was Galaxian, it was brought in almost complete and we worked with the developer to tweak it and then our marketing and packaging department put

it in those arcade consoles. The next one was Pac-Man and I worked on redesigning the playfield, documenting the way it played. The one thing I remember is that I was playing the Pac-Man video game so much that in the evening when I was reading books I would look at the words in print and see little characters moving in between the lines. [laughs] It was disturbing.

By that time someone within the company had noticed that Atari was making money on these video game cartridges—Atari VCS and Mattel Intellivision. Because this was the way Coleco operated. They saw somebody else making money and they figured out how they could do it.

We had a small engineering team inside the company who was tasked with analyzing their product, figuring out how we could make one, inexpensively using off the shelf parts and our own engineering and made a proposal to the company. And that’s essentially the process by which the ColecoVision began to be born.

What they had their eye on was all the arcade machines. They looked at, like say, the graphics chip, the TI graphics chip that was out and the Z80 processor, which were the two main components of it and they figured that they could simulate real arcade games. And they made up cost estimates. However,



er, they made the cost estimates based on the cost of what Atari cartridges were selling for.

## How was it to be a game designer in the early 1980's?

Sometimes it was fairly frustrating 'cause we thought—we actually did very little original work. We were primarily analyzing and documenting existing arcade games. One of the things that a lot of people don't realize is that these days people dump out code and are able to give it to other programmers and port one game to another system really easily. We didn't have that. We had arcade game units, video cameras, stopwatches and notepads.



### How many designers were there in your team?

I was the first one and then I was also the last designer remaining from some of the original people. Because of that, I ended up becoming the manager of the group. I then started recruiting, working with our human resources to recruit other designers who also came out of the roleplaying game industry.

There wasn't a video game industry to draw from at that point. Most video game designers were programmers. So we started recruiting and it was slow growth. First I hired one and then he and I went and interviewed others and it kinda snowballed to where we had 10 designers working on projects. This was when the whole process was more mature. It wasn't unusual that every designer was handling anywhere from two to four projects at a time. On the Adam, on the ColecoVision, on the various consoles and they would be at various points in the process so he might be analyzing and doing design specs on one, monitoring program-

ming builds on another because we did a lot of our projects outside, and in the final test stages on a third one. So, every designer had several projects in process, the same side on the art. We had about as many artists as well, and again these were men and women who had never worked in video games before.

I joke that one of the first people I hired, his job prior to working for Coleco is that he was a house painter. The first artist I hired was a graduate-- had just recently graduated from Paier School of Art, they're in Connecticut. One of the women I hired had just graduated from another art school locally. We were able to bring up some young people out of New York who had worked in animation or... [laughs] believe it or not on slide decks, because back in that time projector slides were still a way and were the equivalent then of what we think of as PowerPoint now. So they essentially made PowerPoint slides or PowerPoint pages, but for slides. So it was computer graphics, but it wasn't what we think of as video game graphics.

### How many of the games were handled by external developers?

Actually, most of our games were developed by outside developers.

We did have three or four in-house development teams of programmers. We had audio programmers, who did

all the audio for all the games. We had a few other programmers who worked on games that we shipped, and it depended on what else needed to be done in the company. The Adam computer ended up taking most of the programming bandwidth in-house. But the rest of it we found development houses outside of Coleco who had the ability to make cartridges and make the games that we wanted to be made. So we provided the design specifications and the graphics, along with an arcade unit, usually, and then these companies would in turn come back to us and solve the technical issues and make game cartridges for us.

Most of our developers were in the United States. I do know we worked with at least one company in Japan, Gakken. That made things complicated because it was very difficult to transfer data across the world back then. I remember specifically we worked with a developer in Southern France, but this was later on. An English expatriate had started a company in South of France—it was in the Riviera part of the country—and it was called Nice Idée or English, “Nice Ideas.”

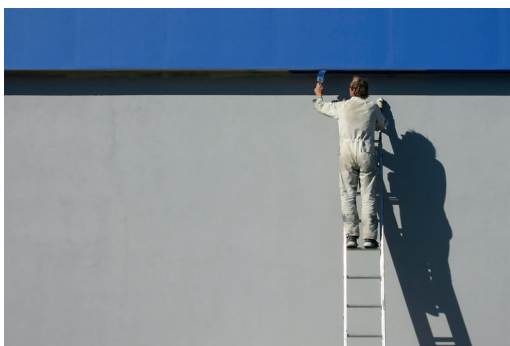
Tim Scanlan was the developer and his company was Nice Ideas. He actually did a lot of work with Mattel, at the time, Mattel products and we kind of acquired his services when Mattel started shutting down some of their projects, particularly their non-Intellevision projects.



### How about the ADAM, did you soon understand that it was going to be a failure? Or did you think it could succeed?

I thought it could succeed. Physically it was beautiful. It's still one of my favourite keyboards to work on. I think it was a very attractive keyboard. The computer software for working on a TV screen, and you could navigate your way around it.

The problem was is that it was bulky. That printer... While it did produce letter quality images, it was also extremely noisy. We had experience with the letter-- that type of printer, the daisy wheel type printer we had them in our office as word processors and they were so noisy and annoying that we had to build soundproofing boxes over the printer in the middle of our design area because the printer was literally running all day. When you have eight designers and four writers using





it  
on  
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work, the  
noise is just in-  
credible.

And, of course, the printer would catch on fire. [laughs] Just an anecdotal story: When we moved to the Hartford-- West Hartford office, they set up a clean room for the high end computers. We had some mainframes in that clean room and a lot of our development stations. And it was in a halon—it was in an environment that if something happened in there that clean room would fill with halon to put out the fires. As a manufacturing test one weekend, they set up an Adam computer printer to just run and the damn thing caught on fire! [laughs] And it triggered the halon system.

#### **Were there any credits in the game?**

No. In fact the Kitchens, the team who designed the Donkey Kong game for the Atari VCS also developed the Carnival game on the same system. One of the things that they programmed in the Carnival game was there's a certain number of very specialized timing moves and maneuvers firing the little—the gun that runs along the bottom of the Carnival game and if you hit the right thing at the right time it shows the credits of the Kitch-

ens. And, when that turned up, company management blew a gasket!

Later on in some of the products we were able to get our names kind of hidden in some of the add-in documentation, but... I think the Rootbeer Tapper game may have had credits listed in it and there was a couple others that were snuck in that way... Basically the company looked the other way by that point as we were already in sort of industry shut-down, except that inside we didn't know it.

#### **Did you feel that industry shutdown in any way?**

I remember the first time even getting a sense of it. I was with a couple of our marketing directors in Chicago at a trade fair and they were hinting about something about the industry starting to have problems. But nobody shared that inside the company. Literally, in the fall of 1984 when we let the first people go from our department, that was the first real indication that something was about to happen. And that was late 1984. Supposedly it had been going on for a year and a half by that point.

Well, the other thing was is that it primarily originally affected Atari product. By that point, Coleco had already gotten out of doing Atari product. It was becoming pretty obvious that we couldn't duplicate arcades well on those parts. We also definitely got out of doing Intellivision products be-

cause nobody liked working on those.

#### **Did you work on any accessories for the ColecoVision?**

Yes. I had some input into the Turbo Wheel [Expansion Module #2]. My partner at the time commented on—because she played Turbo a lot and she loved the game—, was that the original Turbo, the arcade game, because it was Japanese, had the stick shift on the left. The American video game had the stick shift on the right and it felt completely wrong because of that.

I also worked, along with Eric Bromley, on the Super Action Controller, the one that looks massive! Like a huge, basket hilt of a sword, where there should be a cutlass on the top of it, not an orange knobbed joystick. And, I know some people really like that controller and I actually worked with the engineer as well as the industrial designer who did all the design on it. Basically, that was Eric Bromley's idea of the perfect controller. He was a musician, either a clarinet or a saxophone player. It was very natural for him to control things with his fingers like on a musical instrument, which is the way that controller is designed to work. I'm not a musician. That was alien and just didn't work for me. And then, the controller was literally designed to fit Eric's hand. And, for some reason they made an add-on that made it even bigger! [laughs] That little sleeve that goes over the back of it? I have large hands, but this

was never comfortable in my hand.

The original ColecoVision joystick had a very short throw on it, on the ColecoVision cartridges-- a very short throw and four live buttons. With interpretation done off those buttons to get directional movement. The Super Action Controller had eight pads, it was a different type of material under there and you had a very long throw on that lever, that, that handle. Using that thing you were just racking that controller all around and it was harder to make it-- it was actually harder to make angle moves. I worked on it... I washed my hands of that one.

And then the final one was the Roller Controller, that I worked on. I was the designer on that one and, again, the idea that we could save engineering costs by putting controllers into the pad-- into the console. I thought the ball worked just fine, but you'd get whacking it and you would start hitting the sticks on the controllers particularly on the ones that I had in my game by that point, which I'd put ex-



tension sticks on. So, you've got action going on that ball, and you would end up hitting the control stick. And those sticks-- and those pads were hard to get in and out of that console.

### Did you feel like Coleco was leaning towards its end in 1985?

Yes. Even though I was a group manager I do not think I had actual input on the first layoffs of my team. One artist—who happened to be the first I hired—and one designer—who was the last I hired—out of my team were the firsts to be let go as well.

When we came back from a Christmas break, after New Years in the beginning of 1985 we had a department of about 140 people: designers, engineers, artists, QA people—of which my younger brother worked in. On January 2nd, it was my brother's birthday, we came back to work that day,

we weren't aware of what was going to happen. They took half of the ARD team across the street to a theatre—a movie theatre across the street—the design team and gave them layoff notices. They also told them they could not come back in the building and could only ask to have their car keys and coats back. They weren't allowed to come in and do anything at their desks without supervision. Literally half the team went on January 2nd, 1985.

I still call it Bruce's birthday massacre, after my brother but also because he was one of those let go. My design team was fairly shielded because we were essentially still acting as development producers on our projects. But I still lost one designer. Some other people just quit because they were fed up.

By that time I started looking for other work. Once I knew that I started looking for other work, the company actually paid for me to go to the Consumer Electronics Show, CES, in Las Vegas. They allowed me to go there and paid for it rather than canceling it and I started doing that to start peddling my resume around. I actually ended up interviewing with Michael Katz. He actually tried to hire me and I went to the point of actually getting a job offer. He was the head of Epyx at that time. He offered me a design director position. And I went out and I interviewed, looked at housing and in

the end decided I wasn't comfortable with the company or the position, so I turned it down.

So, I had to do with my team and then every couple of weeks, as we finished projects, I had to let someone go or someone transferred to a different department, like education, that was a little bit safer. One of my team members came up to me and he told me, "Jennell, I've got a job with another company," he says, "I'm going to be turning in my notice," and I told him, "Joe, no. Don't. Let me lay you off." [laughs] And he became my next victim and because of that he got separation benefits and then got to start at his next job. And I didn't have to sacrifice anyone else for a few weeks. And that attrition went on for five months. We finished projects, we put them to bed, and then got to let go the ones who were on those projects.

Finally I spent the month of May completely away from the company because I got called in for jury duty. The way jury duty in Connecticut worked at that time is you went and sat at the courthouse for a month. So they didn't lay me off during that time, they didn't lay my team off during that time. I came back and about a week and a half later, they laid off the rest of the artists and designers, including me. So that was the first week of June, in '85. And other than resolving my paperwork, returning a few items that I had on record as being checked out from the company, like a television, I never in-



ter-acted with the company again.

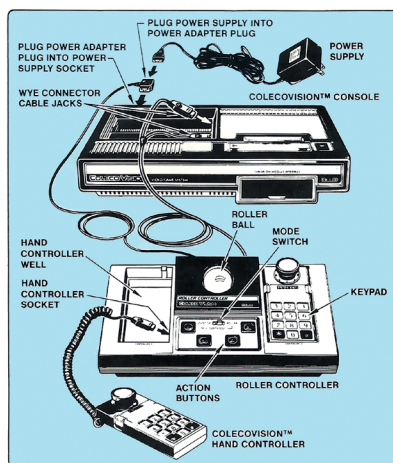
### What did you do afterwards?

I continued to look for work and I ended up going along with the gentleman who'd been my principal designer. We went to work for Eric Bromley who had a consumer products company near Hartford and we worked as directors of production-- product design and development. And I was with them for about 9 months. And... thankfully got let go. [laughs]

Then, I freelanced. I was an artist, a design, writer and editor for about 7 years. I ended up finally going on staff with TSR, first as an illustrator, cover painter and then I was a director of graphics for about 6 months and then went back to being illustrator for the rest of my time there.

Afterwards, one of the designers I had attempted to hire at Coleco and chose not to join the company, had gone to work for MicroProse and ID Software as a designer on the Doom game. And

### HOOKING UP YOUR ROLLER CONTROLLER





he convinced me to come down and interview with ID, this was in January of 1997. I came down two weeks later for an interview with them, spent a week at ID and they hired me as a level designer. At the time I thought it was because I was replacing John Romero, one of the founders of the company who had left, I found out later I was replacing the guy who encouraged me to come interview. [laughs] I worked on games such as Quake II, Quake III and Quake III: Team Arena, and then I left during the development of Doom III.

Once I let people know I was looking for work in Dallas, the same guy who'd recruited me into ID, Sandy Peterson, recruited me, along with another one of my friends who was in the company there; they both encouraged me to come apply and interview at Ensemble Studios. And I was there, then, 7 years. If I could say where I wanted my career to be right now, I would still want to be there. But, Microsoft shut down the studio.

Afterwards I found a job in Atlanta to

work in CCP North America as their Lead Level Designer. Then I quit in the summer of 2012. By that point I'd already been helping set up a small development studio with my girlfriend and two other business partners and in the summer of 2012 I turned in my notice and shut everything down in Atlanta and moved to Seattle and that's what I've been doing since. I'm the creative director for a company called Olde Sküül.

**What is your fondest memory of your career at Coleco?**

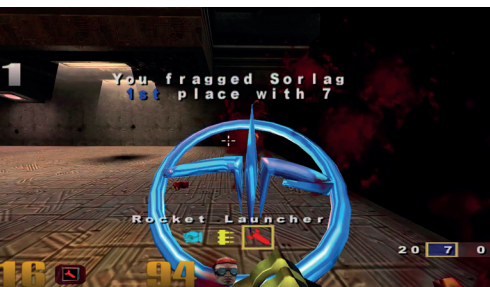
My best memory is actually, it was hanging out with my coworkers, playing Dungeons and Dragons with each other. Off site, in homes... Those are my best memories: gaming. You know, board gaming, role play gaming, with the guys I worked with.

**On the contrary, what was your most difficult moment at the company?**

This is something I shared and actually won a competition for it, recently. I was a young manager... and I think this was 19... 82, late 1982. It was my birthday, and I had been asked to fire one of the contract tech writers who was working for us, a young woman... And, we went to my boss' office, brought the young woman in, were talking with her about what was going on and there came a knock at the door. And it was a birthday balloon-o-gram for me.

It was this kind of singing balloon-o-gram. And I had to get my picture tak-

en with the balloons, and have someone sing to me, while the woman I was firing was sitting in the office behind me. [laughs] I mean, it's more funny than it's horrible. But from a really, just horrible standpoint, it was probably that layoff in January 1985. That first big layoff. Because I've been through them since at other companies and just knowing that so many people whose work I respected and who I had hired and who I know didn't have any other options right now were being let go.







# SYDNEY GREENBERG

## **What did you study before working?**

I actually studied in Chemical Engineering (laughs)!

## **What did you do prior to working for Coleco?**

After graduated, I was living in La Tuque, a small town 200 miles north of Montreal back then, with my wife Sheila, I worked for International Paper Company, the largest pulp-mill company of Canada as the local economy relied heavily on this industry. I worked there for three years before coming back to Montreal which is actually my hometown.

I then joined the Arborite Company making high pressure laminates, laminates surfaces, those kind of items. Following that experience, I worked as a manager for a plastic company until 1972.

## **When did you start working for Coleco?**

I started working at Coleco in 1972 in the Montreal factory located in Ville d'Anjou in the East of the island. This building was the main injection molding factory for Coleco in Canada as well as assembling.

## **What was your role?**

I started as an assistant to the General Manager, David Simpson, before getting this position myself later with 300 people working for me, 24 hours a day and 7 days a week. Over there, I did pretty much everything, from quality control to costing, you name it.

But I left the company for a year in 1978 to manage an injection molding company in Montreal. However, it didn't go as planned, and I realized that I didn't really like the people working over there so I left and came back to Coleco when they asked me to. I didn't get my General Manager position back though. Instead, I worked in the Domestic Marketing division which meant I was part of a two-man team and managing the promotion, commercial proposition of Coleco's products for Canada.

At the end of 1980, Coleco laid out a choice for me to make. I was either going to stay in Domestic Marketing or I could be their first International Marketing and sales manager. Of course, I chose the latter and it was an amazing opportunity for me as I got to know the world and the world got to know me (laughs), thanks to Cabbage Patch [Kids] mainly.

I was in charge of selling the dolls around the world and finding new licensees for various countries around the world. For example, I took care of licensing Cabbage Patch Kids in Spain



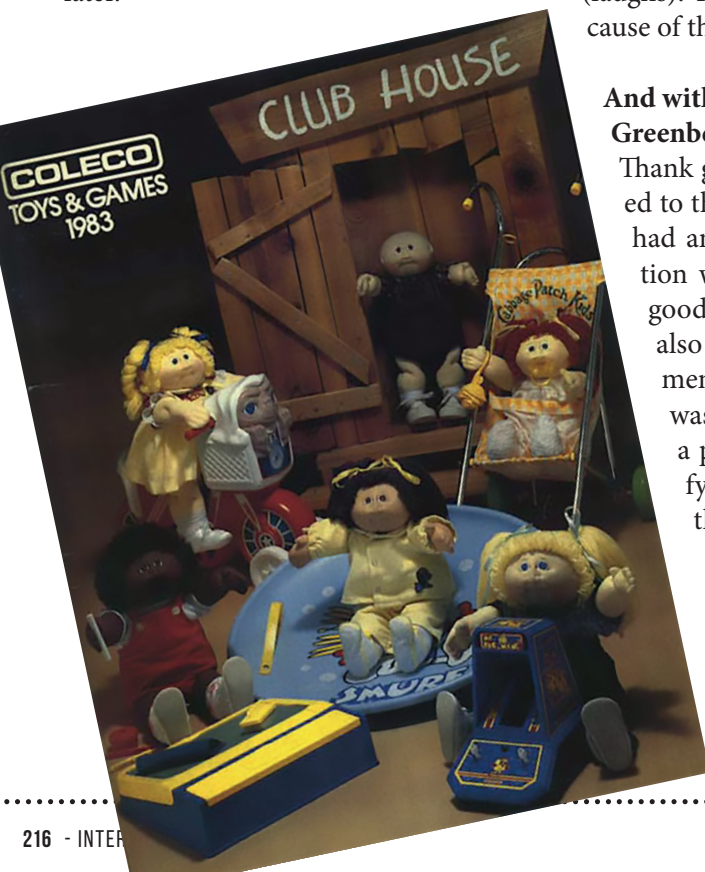
so they would be manufactured over there, the same goes for Japan or Australia.

**Did you work on the creative side of things?**

I never really got involved in production which was taken care of by the main office in Saint-Henri.

**What is the first project you ever worked on?**

Back when I began at Coleco, I didn't work on any specific project per se. I was learning the company as an assistant to the General Manager before getting this position myself one year later.



**What was the work atmosphere like?**

In Ville d'Anjou, the work environment was excellent. I had an amazing relationship with my co-workers as well as the union. In fact back in the 1970s, I was renegotiating the labor agreement contract with the union and we easily reached an agreement. In Saint-Henri, at the exact same moment, the factory workers went on strike! I went there once for a meeting and as long as people saw me and recognized me in my car, they automatically started to throw all kinds of things at me. Needless to say, I went back to Ville d'Anjou and never came back to the factory downtown (laughs)! I was not welcomed because of the competition.

**And with the executives like the Greenbergs?**

Thank goodness I am not related to them. Unfortunately they had an extremely bad reputation which not only was not good for business but was also not good for me. I remember that every time I was introducing myself to a prospect, I had to specify that I was not related to them.

Beside that, I only interacted with Leonard as he was traveling the world with me to go to Toy Fairs, licensing shows and many oth-

er events. I met with Arnold but only during sales meetings that would require me to go to Hartford.

**As the head the International Marketing division, what kind of products were you selling around the world?**

Everything the company had to offer! From the above ground swimming pool that was a major division of Coleco, to the toys including of course the Cabbage Patch Kids.

**What can you tell us about Coleco's first console?**

Once again, I was not involved in production but I know for a fact that when the ColecoVision came out in 1982, it was considered the best and most powerful video game system available on the market. It was better than Mattel's Intellivision and certainly way more advanced than Atari's VCS 2600.

**How did you feel about the CompuVision - Adam computer project?**

I think that the idea was excellent as far as I can remember it. It was pitched to me and other people during a meeting held by Arnold Greenberg.

The competition was there but we really had a good product. However, I didn't agree with the way it was marketed in the sense that because Arnold wanted to focus so much on

this particular project, he decided to sell the swimming pool division that was still making millions of dollars for the company.

**What do you do now?**

I now have my own company since I left Coleco at the end of 1987. I'm a consultant in the toys industry. I have many clients and most of them are in South America. Funny enough, I still manage to sell Cabbage Patch Kids in this region of the world. They will be here forever!

Syd Greenberg Toy Consultants





# LORNE LANNING

**Your father previously worked in the military, do you know how and why he switched from this field to the entertainment/electronic business?**

Well, he was in nuclear submarines, and there he learned what was called packaging for electronic engineering. These were the people who had to make the electronics fit inside the size of the aesthetic box. Packaging was really about making circuit boards, redesigning circuit boards to make them smaller, but do the same thing. It was really about shrinking technology so that it would fit in a tight little consumer product. At that time, it was referred to as “package design” for electronic engineering. And what he was doing was redesigning circuit boards to make them fit inside the Coleco box from the specs to the actual, final box. You know, from the test kits to the final box. Before that, he worked for a company called Essex Engineering in Essex, Connecticut. And they were doing work that was government contract work, voting machines for Congress, and the very first video rental vending machines.

He was starting to see more technology applications that he had learned

in the military. He was now applying to private companies, working for private companies that were still - most of them were still contracting government or military or defense. Then, as the company he was in started playing with more unique things like electronic voting systems for the government, the federal government, or vending dispensing machines for video game rentals - those things. That, I think, set him up to be employable at Coleco.

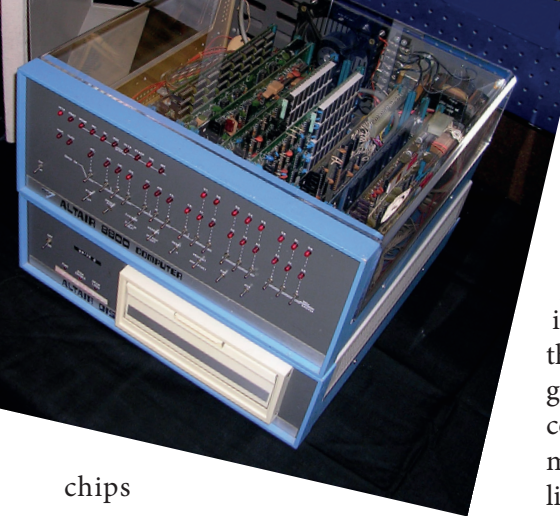
**What did he do over at Coleco?**

Well, he was a package designer, and what he told me - I don't remember exactly which boards he was making fit inside the package that ultimately wound up being the ColecoVision device. But I know he was working on - focusing on shrinking those boards - the square-inch footprint that they took up, and making them smaller and smaller. At that time, he was just blown away with processors. Digital computing, the beginning of transistors and computer chips. He was just - they weren't very powerful, he was just blown away by that. He was very eager to learn about what was happening more in the digital realm, particularly as it pertained to starting to put graphics up on a screen.

**Was he talking to you about his job at Coleco?**

A little bit. You know, I only saw him on the weekends, my mother was divorced from him. But I remember him talking 'cause he would show us these





what he was so excited about on the technology level, but we knew he was a smart guy, and we'd listen to what he told. He was just completely fascinated with how computing was getting small and becoming available for the public. One thing that people don't think about is video games were in more homes before computers were, but the video game machine was a computer. So it's really like the video game machine was the first computer in homes, except it was just streamlined to play video games.

I don't remember the year the Altair came out, but you had to be a serious geek if you bought an Altair. And my father wasn't – he didn't have an Altair. I think he couldn't afford it. But just comprehending that, the ColecoVision wound up. Nintendo was emerging as well. They are both after Atari. And Coleco had actually licensed Donkey Kong, and he was involved with that but not as a developer, though. Back then they were just trying to figure out how to fit memory on the cards. It was more, again, in packaging and, like I said, electronics packaging was really about, in my opinion, shrinking. It was figuring out – they'd have a big prototype, and it's a box that takes up a whole desktop, and then they'd say, "OK, how do we get that into this little piece of plastic that we want to look like this?" But it kind of blows my mind that these were the first computers in homes, not computers. That it was the game

machines were the first real computers arriving in homes. So that's really fascinating when you think about how much times have changed.

I doubt my father had that much influence, but I knew he was excited about the possibility. Coleco wasn't Atari. Atari had this lightning-strike success, and massive, really great game designers there. Coleco was more of a toy company that had been figuring out, you know, they also at the same time had the hit Cabbage Patch Kids... which was a huge doll here, you know, between the birth certificate, which was kind of funny. But I don't think they looked at gaming the same way that someone like Atari or Nintendo did, because for their company it was only one slice. You know, it was only one thing they were doing, but they did many.

**How did you feel having your father working in the video game industry? Did you brag about it in school?**

At the time, my friends and I only played arcade games. And the reason was that was the era we were interested in girls. So that's where you went for the girls. So the girls were Thursdays, Fridays, Saturday night, Sunday during the day, a lot of them were hanging out in the arcades, or they were hanging out at – roller skating used to be big. On the weekends in the States back in the 80s they used to have all kinds of roller skating places. So you could go to a roller skating

place. So you can't drink yet, so there's nowhere to go, so they go from these roller skating places, and the roller skating places would always be next to a big arcade – at least it was in our town. And so you'd go roller skating and hang out at the arcade, and that's where the girls would be. So, for me, I didn't want to be home playing video games; I wanted to be out trying to get girls. So I only started playing home video games because my father worked at Coleco. So he was like, "Here, check this out," and we were like, "Oh, this is really cool!" I played my brother and stuff like that, but if I were with my friends, we were playing arcade games because we wanted to be cool, and have our initials up on the high score, and then you could have bragging rights, and then maybe you could impress a girl. The kids that were staying home playing their computers they were the geeky kids. I was trying to get girls. We were getting into trouble at that age, too. All kinds of drinking and partying, having fun, causing trouble. It was more of a reckless era for myself.

I didn't want to do anything at home, because I wasn't really that happy at home. I didn't have a good time at home. As much as I could get out, I was getting out. What that meant was



chips  
– we were just kids, so we didn't really care that much – but he would be like, "This chip..." – and he had...he was the type of guy that collected all those old calculators, like the original scientific calculators, Texas Instruments was making. I remember he wanted to work at Texas Instruments, but I don't think he wanted to move to Texas. Which I can't blame him for. But he was really into that idea that calculators could be doing so much more math, and computers were just really beginning, in a way. At least, home, non-supercomputers or business computers. He would talk about the, sort of, magic of the chip.

My brother was into music, which was not at all connected to computers at the time. But we both liked the games, and playing arcade games, and we loved – by the time ColecoVision came out, we of course had ColecoVision units and all the games, so we thought it was great. And that was all fun, but we didn't understand, really,



I wasn't playing a lot of console games at the time.

I mean, I played the hell out of Zaxxon, and I think Frogger was on there, too. And, of course, Donkey Kong was the best one. And I would play those games. But usually late at night, or on a Sunday morning, or something like that, when we had to be in the house, when there was nowhere to go. I was much more into the arcade games though. However, having the ColecoVision, it was like, "Wow." It was surreal because suddenly your TV – there was something close to the arcade that you could play on your TV. So my console playing was light in those days.

### **Were you influenced in any way, having your father work in the video game industry?**

I was, because he understood the processing curve, what they call Moore's Law. He understood that.

I was very interested in art, because I thought that was the only thing that was going to get me through in life. That was the only real skill I thought I had. I was very interested in art – learning how to paint and how to be a designer – and he was trying to convince me that computers were going to be a big part of future art. And we're

talking, even in that era, the ColecoVision. And he was like, "You should try to study computers in school." But the kids in the computer class at school in 1980 – those were geeky guys, the classic image of the young scientist. They were really into it. An artist had no interest at that time. There were no artists at that time that had really interest in that stuff, because you didn't see how it would affect what you wanted to do. But my dad could tell – he knew. And I think it was really the ColecoVision experience where he was like, "Look. As computing power increases, these pixels will get smaller. And as that gets smaller, eventually you won't notice it's made up of these little pixels. And that'll mean that tools will develop and you'll be able to make art on computers." And he was telling me about how some artists did that at Coleco. And I was like, "That's not art." I didn't really see the kind of art I wanted to make when I was looking at Donkey Kong. But he never gave up on that. He was constantly telling me to look into computers and all that stuff and I was constantly not listening.

Eventually he sent me – when I went away to college – a video, and it was an HBO special interview – it was actually an interview of Sherry McKenna, who was running major computer graphics companies in Los Angeles at the time, Digital Productions and Robert Abel and Associates. And in the history of computer graphics, those are

two of the most important companies for Hollywood and computer graphics and what happened, how they really brought it to the mainstream. That's when I saw the really exciting graphics coming out of a computer. That was the first time I saw it, when he sent me an interview with Sherry that he recorded on HBO. I didn't know who Sherry was, of course, because I was still in Connecticut, but she was running these companies. I was in New York art school.

All in all, he saw that computers and art were going to have a big future, and I didn't get it until he sent me that video. That's when I started learning. By that time, it was about 1986. And by '87 I packed my bags and moved to L.A., and got into visual effects and film, with a focus on computer animation. So it really – his passion for it was driven from what he saw and what he knew was coming at Coleco. But he was kind of an inventor-visionary, but he never did anything with that, aside from people just employing him as a job.

He saw that computers and art were going to blend, and at the time, I never thought I would start making video games. I never thought that, because I just didn't make the connection between games and movies. They looked so different. And one had to do with computers and the other had to do with cameras. So I just wasn't making that connection yet. But I wound up

making that connection early. And it was ultimately because of his experience at Coleco.

### **Even though he influenced you towards the computer, did he try to make you go into the video game industry before you went there by yourself?**

No. Eventually, he was surprised because he thought I was just going to stay focused on visual effects. And then when I told him I wanted to start a game company, he thought it was brilliant. He thought I would make him rich, but that didn't happen. He died before that was able to happen.

### **Finally, do you know when your father left Coleco?**

I think he left when they went bankrupt. I think he was – when they started to scale down. So I don't know if it was at 11:59 and they went bankrupt at 12:00, or if he was part of the earlier layoffs when they started thinning down the company before it went bankrupt. But he was there 'til they let him go, and he was let go because the company was having problems and they were shrinking.







With thanks to our amazing Kickstarter backers without whom this project wouldn't exist.

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More than 80 years ago, the Connecticut Leather Company opened its door in the midst of the Great Depression in 1932.

Maurice Greenberg built, along with his two sons Leonard and Arnold, this company as a family business from the ground up facing all sorts of trials and tribulations until achieving massive success in both toys and video game business with the Cabbage Patch Kids and the ColecoVision.

Fully endorsed by Coleco, this book also enabled former employees to tell their career story from inside the trenches of Coleco. A must read for all toys and retro gaming fans.

