

The City of Invention Interactive Dark Ride Epcot, Walt Disney World

> Mike Brister July 2, 2012



# The City of Invention



We have always sought to re-shape the world around us. The history of humanity is the history of innovation, of change, and of invention. Each generation of advancement builds upon the discoveries and creations of those that came before. Every device, mechanism, apparatus, and machine we create is a chronicle of human ingenuity.

The City of Invention is the living embodiment of this ideal, built upon the foundations of millennia of mechanical innovations. It started as a museum to collect the most inspirational inventions of our past and a workshop for forward-thinking Innovators to create new devices to improve our world. It has since grown into a thriving community of robots (all born right here) that continue the cause of collection and creation... maybe a little too obsessively.

Over time, this unique city has slowly become one colossal working machine, a massive clockwork device that is continually re-imagined by assimilating the creations of the past so it can help us create the emerging technologies of our future. Its sole purpose, to inspire and enable the production of new ideas and inventions. The City of Invention and its robots need a very unusual fuel to power their city: human ingenuity. And that's why they need you!

Come be a part of the continual re-invention of The City of Invention. Take a journey through the city, collect the creations of our ancestors, and invent something new and amazing... or at least amusing. With a friendly robot to guide you, board one of our intelligent conveyance devices and direct your own unique path through the city. Using the latest in touch-free, gesture-tracking technology, interact with existing inventions, collect parts, and build something of your own that just might be the next big thing.

# **The City Gates: Pavilion Entrance**

The round, riveted steel structures and whimsical mechanical workings of the City of Invention burst out dramatically from the pavilion's entrance like a slowly exploding pocket watch of gigantic proportions and Jules Verne aesthetic. Beyond the entrance, a skyline of skyscrapers from the past and the future rise up together among elevated train tracks and flying cars. A thriving population of busy robots bustle in and out of the structures everywhere, creating a soundtrack of pleasing synchronized noise as they work.

At the open front gates to the city, a tall and chatty salesman-styled robot invites you to tour the City of Invention. "Don't just see the future! Come on in and help create it today!"

# **Below the City: Queue Line**



The entrance leads directly into the maze-like tunnels and paths of the city's underground. The interior is littered with many rotating gears, working machine parts, and automated gates. It is an interactive playground of choices and games designed to prepare new Inventors for their upcoming creative duties.

Throughout the space, Rube Goldberg-style mechanical devices wait for curious minds and hands to push large metal balls on roller coaster-like tracks that twist and turn throughout the entire area. The actions of other guests turning cranks, pulling levers, and otherwise diverting the tracks change the ball's path and its affect on other devices in the room.

At several points in the queue, you will encounter gates that divide paths and alter traffic patterns. Sometimes your gate choice determines your path and sometimes the choices of others will divert you into new experiences that will never be exactly the same twice.

#### The School: Archimedes Crew

Your final gate choice leads to classrooms in The City of Invention's School that look like large metal boxes where you will participate in group training. Floating behind a podium in the corner is an adorable little robot with a face made of animated LEDs and the name "RKMeDZ" faintly glowing through his shiny white body-covering. He presses buttons that close the doors and dim the lights. The little host holds a CB radio microphone up to his implied mouth and says, "Greetings Future Inventors and welcome to The City of Invention. I'm Archimedes, the host for your inventing adventures today. Everybody look up!"

The darkened ceiling explodes with light and color, revealing a room-sized video screen above you. Depending on the room and your time of arrival, you and others will play one of many possible games created to train you on the hands-free work environment you'll experience further inside the city. In some games, the group's waving arm movements will shift objects on the ceiling to assemble a virtual device, guide and sort parts on overhead conveyors, or connect multiple gears to power an imaginary machine. In other games, colors will track you, requiring everyone to move around to properly create an image. And some games are purely artistic, using your movements to create beautiful patterns with music.

Archimedes will guide you through the games and even alter the activities depending on the level of interaction your group has. If you have chosen to participate in park-wide "smart technologies", he may also address you directly or ask the group to participate in the celebration of a special day you may already be enjoying.

### **Mass Transit: Load Station**



When the training game is complete, Archimedes will open another set of doors that lead you into the City of Invention's Grand Central Station. The room is round and has a floor that consists of one large, slowly rotating gear-shaped turntable. A continuous stream of vehicles enter on one side of the room, lock into the spaces between teeth in the floor gear, rotate with it while riders board, then exit on the other side of the room.

The trackless, self-powered vehicle, called a Way-finding Intelligent Device – Guided Electric Transport (or W.I.D.G.E.T.), is a tall, 4-seat car with a low bench in front and a bench in back that is raised so that the back riders' knees are level with the front riders' heads. WIDGETS are covered on the sides and top so riders can only see forward, but they can rotate and do not always travel in the forward-facing direction. In this room, they are travelling sideways in a circle to stay locked to the turntable gear.

#### The Streets: Driving Lessons

Leaving the load station, your WIDGET moves out onto the streets of the city. Robot-themed shops line the street in front of neon-enhanced skyscrapers and overhead mass transit tracks. The WIDGET turns to face its forward motion and suddenly Archimedes drops down from the sky and floats along in front of you. "Hello again. We need to do just one more bit of training before we dive in. At times during this journey, you will need to make directional choices for your WIDGET vehicle. Left or right? It's easy! Everybody just point where you want to go. Try it now!" Archimedes says and then flies up and away. As passengers point left or right, the WIDGET suddenly rotates in that direction. The more of you that point the same way, the faster the spin. Near the end of the road, Archimedes' voice speaks from onboard speakers, "Okay, that works. Time for a real decision! Let me turn you around." The WIDGET rotates forward, facing an electronic street sign with left and right arrows on it. The passengers point and the WIDGET turns at the last moment to enter one of 2 doors on a building called The Archive.

#### **The Archive**

The voice of Archimedes says, "This is The Archive. It's where we store many of the inventions that we have collected. Take a look around. You're in control."

The room is a large and strangely-shaped space filled with rotating pedestals that look like clock mechanisms and several other WIDGET vehicles. On each pedestal sits a famous invention from our past. Your WIDGET pulls up to the first pedestal, which displays a small torch on fire and a stone wheel. "You had to start somewhere, right?" Archimedes comments. Under the pedestal, left and right arrows light up and blink. You choose by pointing and the WIDGET turns to approach a new pedestal. At each pedestal, Archimedes makes amusing commentary about the famous invention displayed before arrows prompt you to pick your next destination. Most of the inventions are comically demonstrated by robots similar to Archimedes and some of the famous inventions you may see include flying machines from Leonardo da Vinci, Velcro, a Segway, a tuba, an early computer, a coffee-maker, a unicycle, bifocals, a camera, and an electric toothbrush. Each WIDGET will visit 4 to 6 pedestals before leaving the room.

# The Archive: Hall of Invention



You turn into an apparently endless hall of ornate glass and steel, lined with hundreds of gold picture frames. It feels like the Palace of Versailles re-imagined into 1950's science fiction. The WIDGET rotates to face the picture frames as it travels sideways down the hall. Passing first by a large mirror you see the reflection of your own vehicle and fellow travelers. But as your image moves out of the frame and onto the wall, you see yourself as a Victorian Age automaton. Its movements mirror yours and you discover that you're in control.

Archimedes says, "That robot in the mirror is under your control. You can use it to experiment with our collection of inventions without damaging them."

Inside the remaining picture frames, animated images of famous inventions from the beginning of civilization to the most recent innovations react to the touch of your robot reflection and spring into action with sometimes serious and sometimes whimsical results.

#### The Workshop

At the end of the hall, the WIDGET exits the Archive building and enters another with a sign over the door labeled The Workshop. "This is where we take the creations of the past and rebuild them into something new," Archimedes voice says. "Take a look around at some work in progress by our robot crew. You're in control again."

Guided by left and right flashing arrow choices again, your WIDGET takes you to 4 or 5 of several large workstations where robots are attempting to re-think existing technology with a wide range of success levels. Some of the experiments you might see include a robot building a high speed dishwasher from a toilet or an over-sized toaster popping out pressed pants and shirts.

# The Store: Hall of Collection

Leaving the Workshop, you turn into a building called The Store. It's made entirely of a lengthy hall of electric lights, wires, and neon. Along the black walls, hundreds of video displays from every part of the 20<sup>th</sup> century buzz and glow. Sparks and arcs of raw power jump from wire to wire, causing light bulbs to flicker and screens to change channels. The WIDGET rotates to face the screens as it travels sideways along the hall. Passing first by a large video wall, you see the image of your own vehicle and fellow travelers. But as your image moves out of the video screen, you see yourself as a modern industrial robot with a large metal basket in front of it. Its movements mirror yours and you are once again in control.

Archimedes says, "Now it's time to collect parts for your own invention. Use your robot to collect parts. Grab as much as you can, you never know what you'll end up building later."

Inside the hall's video monitors, animated images of mechanical parts, power sources, and specialized tools are yours to collect. Everything you touch instantly jumps into your basket with an electrical zap. You must act quickly to collect as many interesting objects as you can.

# The Factory: Robot Rat Race



The WIDGET exits the hall and enters a building called The Factory. You are in a room that appears to be filled with hundreds of intersecting conveyor belts. Several fast-moving robots work hard to sort invention parts as they whip by on the belts at high speeds. The parts that you just collected suddenly drop from large overhead baskets and land in front of the overwhelmed robots.

Archimedes explains, "Time to sort your parts and get them ready for your inventioneering. As you can see, they are handled with great care by our top notch crew."

Before long, the inundated robots can no longer keep up and parts begin colliding and flying through the air, spontaneously creating strange machines and even attaching to the frustrated robots. In the chaos, a few odd extra parts find their way into your collection just before your WIDGET leaves The Factory.

#### The Laboratory: Hall of Creation

You enter a building called The Laboratory and turn into a final everlasting hallway of shiny black glass and glowing streams of plasma. Hovering in the air directly in front of you, 3D images of the mechanical parts collected earlier in the journey rotate around a circular workspace containing a reflection of you as the Inventor you are about to become. There is a separate workspace reflection straight in front of each of the 4 WIDGET passengers. You are now ready for your final task... to create a new invention of your own.

Archimedes says, "This is it! Time to create something new. Use your robot to assemble your parts into a new invention. It doesn't matter if you don't know what it will be. Remember, discovery is part of the process and many important innovations are created by accident. No matter what you create, the power of your creativity and ingenuity will help us power the City of Invention for another day!"

Through your reflection, you grab the spinning pieces and move them into the workspace. As the pieces get close to each other, they snap together and make unique connections. As more parts are assembled, the invention comes to life and performs one of hundreds of possible functions. Most of the potential functions are absurd and humorous, but a few specific combinations result in forward-thinking, world-changing brilliance! At the end of the hall, the newly created machines drop into large tubes, sending them into The Core of the City.

Archimedes says, "Now it's time to go to The Core and see your work in action. The Core is the power plant for The City of Invention."

### **The Core: Power Plant**



Your WIDGET rotates to face a large metal iris that scrapes open to reveal the largest facility at the center of the city. You drive through the iris and into The Core. The WIDGET then slowly slides sideways around the perimeter of the colossal space. In front of you, towering mechanical constructions, clockwork gears, pipes, conveyor belts, and overhead cranes are tended by an army of dutiful robots of varied sizes and styles. The central tower of The Core is alive with the sparks and glow of hundreds of video displays, cables, and arcs of electricity that feed the power of human creativity to the rest of The City of Invention.

"It's time to see how you did!" Archimedes explains as he drops into view in front of your WIDGET.

Using the magic of augmented reality on a large scale, Archimedes retrieves each of your inventions as they pop out of large metal tubes and flies out to the Core, where he places them inside the Power Chamber. Your inventions immediately spring to life as The Core surges with energy and then pulses power out to the rest of the city.

#### The Core: Invention Evaluation

As you admire your work, the WIDGET slides out of The Core and sideways into a tight room with a large display in front of you. Archimedes' voice says, "Now let's see what you created." One at a time, each of your inventions is displayed in operation on the screen with an image of you as an Inventor working on it. You also see an analysis of your creation, scored for creativity, innovation, and its impact on humanity. The better the score, the more power you provided the city. Every invention is a success, but some have more important purposes than others and most are simply fun toys. Inventions may include a 6-legged walking car, a cat washer, a soda-fueled jet pack, a robot karaoke machine, a pie gun, an automatic gift-wrapper, a sock-sorter, and everyone's favorite... the rubber chicken trebuchet.

Archimedes appears on the screen and says, "On behalf of the robots of the City of Invention, and of course... all of humanity, I'd like to thank you for your fantastic contributions. Now take this experience, get out there, create something new, have a crazy idea, make an accidental discovery, and help change the world for the better."

# The End: Unload Station

The screen slides away, revealing that your WIDGET is already locked into the slowly rotating teeth of another giant gear turntable and your journey into The City of Invention is at an end.