

Disney Blends Imagination and Technology to Deliver Landmarks in Theme Park Innovation

LAKE BUENA VISTA, Fla. — Through a rich combination of storytelling, guest service, imagination and complex engineering born out of years of research and development, Disney’s resorts around the world have become synonymous with cutting-edge achievements in themed entertainment since Disneyland opened in 1955.

Walt Disney Imagineering (WDI), the most diverse creative design and development company in the world, is responsible for the creation — from concept through installation — of all Disney resorts, theme parks and attractions, real estate development and new entertainment venues.

The Imagineering team includes show designers, artists, writers, project managers, engineers, architects, filmmakers, audio and visual specialists, animators, manufacturing groups, computer programmers, land planners, ride system designers, finance experts and researchers. Together they are responsible for all phases of project development — from concept initiation to field at direction and show installation. WDI maintains facilities in Glendale, Calif., Walt Disney World Resort, Disneyland Resort, Tokyo Disney Resort, Disneyland Resort Paris and Hong Kong Disneyland.

Walt Disney Imagineering has been granted more than 300 company-owned patents in areas including ride systems, special effects, interactive technology, live entertainment, fiber optics and advanced audio systems. Technological landmarks first introduced in Disney’s theme parks include:

- A 360-degree motion picture technology using multiple synchronized cameras (*Circarama, U.S.A.*, Disneyland, 1955); later refined and updated for multiple attractions around the world including *Le Visionarium* (Disneyland Paris, 1992).
- The first daily operating monorail system in the United States (Disneyland, 1959).
- The first roller coaster to use cylindrical rails and urethane wheels (*Matterhorn Bobsleds*, Disneyland, 1959).
- The creation of Audio-Animatronics figures, which allow humans, animals and creatures of fantasy to be animated in three dimensions with an astonishing degree of realism (*Walt Disney’s Enchanted Tiki Room*, Disneyland, 1963).
- The first computer-controlled thrill ride (*Space Mountain*, Magic Kingdom, Walt Disney World Resort, 1975).
- An advanced 3-D motion picture photography system (*Magic Journeys*, Epcot, Walt Disney World Resort, 1982); later enhanced for multiple attractions around the world including “*Mickey’s PhilharMagic*” (Magic Kingdom, Walt Disney World Resort, 2003).

- A thrilling attraction with random programming for an unpredictable ride and drop experience (*The Twilight Zone™ Tower of Terror*, Disney's Hollywood Studios, Walt Disney World Resort, 1994).
- State-of-the-art vehicles that move through three-dimensional environments with a capacity for random motion-simulator effects (*Indiana Jones Adventure*, Disneyland, 1995).
- Trackless ride vehicles that follow a random path by relying upon unseen transmitters in the floor (*Pooh's Hunny Hunt*, Tokyo Disneyland, 2000).
- A virtual hang-gliding experience that provides a panoramic view of sweeping landscapes augmented by scents released during key scenes (*Soarin' Over California*, Disney California Adventure, 2001).
- A custom ride system that combines centrifuge technology with sophisticated virtual imagery for an exhilarating astronaut adventure to Mars (*Mission: SPACE*, Epcot, 2003).
- A blend of digital projection and voice-activated, real-time animation that permit live, unscripted conversations between theme park guests and an animated character (*Turtle Talk With Crush*, Epcot, 2004).
- The first Audio-Animatronics figure that features lips with a wide range of lifelike movements, and digitally animated eyes that can look directly at the particular guest with whom he is conversing (Mr. Potato Head in *Toy Story Mania!*, Disney California Adventure and Disney's Hollywood Studios, 2008).
- Guests with visual disabilities can explore Walt Disney World theme parks in a whole new way through a handheld Disney-designed device that provides detailed audio description of outdoor areas (Assistive Technology Device, Walt Disney World, 2010).
- Interactive Mickey Ear hats that glow in myriad colors, commanded with the latest technology to complement the imagery and beat of the fireworks and spectaculars (*Glow With The Show*, Disney California Adventure, 2012).
- Using spells in the form of trading cards, guests become active players in a role-playing game and are able to interact with Disney characters at an entirely new level (*Sorcerers of the Magic Kingdom*, Magic Kingdom, 2012).
- A high-tech detection device called F.O.N.E., or Field Operative Notification Equipment, helps maneuver guests through an interactive, undercover mission (*Disney Phineas and Ferb: Agent P's World Showcase Adventure*, Epcot, 2012).
- Radio Frequency (RF) located in *MagicBands* interacts with touch points located in places such as resort room doors, theme park and water park entrances, *Disney FastPass+* entrances, payment locations and on mobile devices used by Cast Members (*MyMagic+*, Walt Disney World, 2014).
- Featuring an innovative, first-of-its-kind ride system, the mine cars rock back and forth during twists, turns, hills and drops (*Seven Dwarfs Mine Train*, Walt Disney World, 2014).

As Walt Disney once said, "It's kind of fun to do the impossible."

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