



TECHNOLOGY & INNOVATION

Walt Disney was an innovator who continually adopted new technology to enhance and advance the art of storytelling. His unshakable faith in the future led him to explore the application of new technologies in developing animation, live action films, nature documentaries, special exhibits, and parks and city planning. He also supported innovation in other fields, especially through his film work that championed initiatives in atomic energy and the NASA space program.

Walt Disney innovations include:

- First animated film that successfully synchronized sound and image (Mickey Mouse in *Steamboat Willie*, 1928)
- First animated film in three-strip Technicolor (*Flowers and Trees*, 1932)
- Refinement of two-story multiplane camera, which gave unprecedented depth to animated films (*The Old Mill*, a short, and *Snow White and the Seven Dwarfs*, both 1937)
- Redefining the concept and production of a feature-length animated movie (*Snow White and the Seven Dwarfs*, 1937)
- First movie to use Fantasound, a multi-channel sound system that predated the widespread use of stereo and surround sound by nearly 20 years (*Fantasia*, 1940)
- First major Hollywood movie studio to produce series programming directly for television (ABC, 1954)
- First animated feature to use widescreen, CinemaScope technology (*Lady and the Tramp*, 1955)
- America's first daily-operating Monorail system (Disneyland, 1959)
- First studio to produce regular color programming for television (NBC, "Walt Disney's Wonderful World of Color," 1961)
- Development of new generation of optical printers, which enabled the Disney Studio to combine live-action and animated films together (*The Three Caballeros*, 1945; *Mary Poppins*, 1964)
- Development of Audio-Animatronics in 1963, a form of robotics used for shows and other attractions in Disneyland. Audio-Animatronics was also used in the 1964-1965 World's Fair in New York (with "it's a small world" and Abe Lincoln in the State of Illinois Pavilion).

In order to honor Walt Disney's extraordinary achievements, The Walt Disney Family Museum commissioned the Rockwell Group, an architecture and design firm specializing in cultural and educational design, to develop innovative and engaging Museum exhibits that tell the story of Walt Disney's life and work while pushing the boundaries of exhibition design.

State-of-the-art Rockwell Group innovations designed specifically for the Museum include:

- **The Hyperion Studio, birthplace of *Snow White and the Seven Dwarfs*:** A touch-screen table will let visitors explore multiple facets of the Hyperion Studio culture in a non-linear way. They will be able to view video clips, still photos, interviews, and factoids. The Hyperion Studio was the birthplace of *Snow White and the Seven Dwarfs*. (Developed in collaboration with Second Story, of Portland, OR.)

- **Multiplane Camera: bringing illusion of depth to animation:** Rockwell Group installed an interactive, miniature version of the multiplane camera, which Disney used to stunning effect in *Snow White and the Seven Dwarfs*. An original, two-story multiplane camera will be on view in the Museum. (Developed in cooperation with Roto Studio, of Dublin, OH.)
- **Schultheis Notebook: the special effects behind *Fantasia* and more:** The original special effects notebook of Walt Disney Studios employee Herman Schultheis, which will be on view at the Museum, has been scanned. The digitized version is an interactive notebook that will allow visitors, via a touch-screen table, to browse through the journal, zoom in on drawings, photographs, and documents, and play back a scene from *Fantasia*. (Developed in collaboration with Second Story, Portland, OR.)
- ***Steamboat Willie*: synchronizing sound to movement in animation.** To illustrate some of the challenges of synchronizing sound to film, Rockwell installed a table with touch-sensitive bronze instruments that will let visitors try to match sounds to their cues. (Developed in collaboration with Roto Studio, Dublin, OH.)

In addition, the following installations were developed by other consultants:

- **Optical printer: the seamless marriage of live action and animation in *Mary Poppins*.** The magical effects achieved in *Mary Poppins* are demystified by no less an authority than Bert, the chimneysweep. The display incorporates a live-action video of a miniature Dick Van Dyke (who played Bert in the movie) darting around an optical printer to explain how the process works. (Developed by Technifex.)
- **Video Globe: Disney's achievements in the round.** Video and images that illuminate achievements from the last 15 years of Disney's life will be projected onto a suspended five-and-a-half foot video globe in one of the Museum's galleries. Highlights will include the evolution of Disneyland, ABC's "Disney Land" television series, and other landmark accomplishments. The sphere will be illuminated by eight projectors to create a completely spherical image visible from all areas in the gallery. (Developed by Effect Design, San Rafael, CA.)

The Walt Disney Family Museum uses technology throughout its galleries. Visitors will find radio-frequency identification (RFID) sensors to initiate activation of closed captioning for hearing-impaired visitors and to let gallery guides deactivate audio while giving tours as well as over 200 video monitors throughout.

For more information on these and other exhibits at The Walt Disney Family Museum, please contact:

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