

Prestigious Science Discovery Museum Selects Innovative 3M Multi-touch Displays for Interactive Exhibit

The Application

Learning is perhaps the most fundamental characteristic of the human experience. How we gather and process information influences our daily lives in numerous ways. Venues like schools, libraries, and other learning centers constantly seek new forms of interaction and application in order to provide a creative space for knowledge. On top of facilitating intellectual progress, these educational establishments also work to provide a dynamic environment that encourages individual potential and group collaboration.

A prestigious science discovery museum wanted to increase visitor engagement and attendance with the addition of a more hands-on interactive display element to each exhibit. This addition was meant to complement museum exhibits in a way that encouraged learning through exciting interaction and allowed visitors to enhance their learning experience through exploring digital content including websites, images, videos and games. The museum was also looking for the interactive display concept to be dynamic and the content to be easily modified to accommodate new exhibits or user groups. Understanding the public's attraction to mobile touchscreen devices, including smartphones and tablets, the museum sought to deliver a similar interactive solution with a natural user interface that allowed users to intuitively and effortlessly access related information. Lastly and most importantly, the museum wanted this new interactive element to create a unique and memorable visitor experience that would allow the museum to differentiate itself from other like venues in the area.

The Problem

It was crucial to the museum that the displays for their interactive discovery center be very easy to use and have multi-user capability in order to easily handle the constant flow of visitors. Previous displays reviewed by the museum were designed with only one or two touch points, which limited interaction to just one user at a time. The museum anticipated that many users would want to experience the interactive discovery center simultaneously and began to look for an intuitive, mid-size, multi-touch display that could accommodate multiple users. The idea was to create excitement around the interactive discovery center and allow for advanced user activity that was on par with smartphone or tablet device performance. This would allow users to intuitively interact with the content using a natural user interface. Each of the exhibits featured varying content that was often refreshed during new seasons and new themes from programs that were part of the museum's schedule.



Many of the museum exhibits are placed in environments with varied amounts of natural and ambient lighting. As a result, the display needed to be fully operational and viewable in all types of lighting environments. Some of the displays that the museum evaluated, including displays that featured optical and infrared technologies, were susceptible to poor performance in environments with direct light.

Another factor of importance in display selection was aesthetics. Inspired by the industrial design of modern consumer devices, the museum was looking for a sophisticated display that complemented the design cues of the museum exhibits. Additionally, the museum planned to have these displays in place for a prolonged period of time and wanted a robust, commercial-grade display that could sustain optimal performance throughout an extended life cycle. As the museum expected large amounts of people to use the displays on a daily basis, the high traffic environment required a reliable, durable solution that could withstand the constant use it would get while in use at the museum.

Finally, along with the advanced functionality, operability and aesthetics, the display needed to have reliable durability and be easy to maintain. Many of the displays that the museum originally evaluated required a bulky bezel that not only was an obstacle during cleaning, but also collected dust, dirt, and grime in the corners of the display.

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Finding no success in selecting the perfect solution for their interactive discovery center, the museum was compelled to continue their search for a superior multi-touch display.

The Solution

The 3M Multi-Touch Display M2467PW (24-inch desktop display) was the ideal choice for this particular application due to its purpose-built design to meet museum environment specifications. Featuring 3M's Projected Capacitive Technology (3M PCT), the M2467PW delivers high performance multi-touch functionality highlighted by its ability to recognize 20 simultaneous touch points, each at a 6 ms response time. This allows multiple users to simultaneously interact with the screen and enables the museum's software developers to build an engaging, interactive application that is educational and memorable.

The M2467PW premium LCD features include 1080p Full HD resolution, LED backlights, and ultra-wide viewing angles. These features amplify the user experience by providing sharp image quality, enhanced color brilliance, and minimal image distortion when user view the display from wide angles, as they would at the museum's interactive exhibit.

The M2467PW operates flawlessly in all types of lighted environments, giving the museum added versatility for where and how they utilize the displays in the exhibit. Its sophisticated flat front surface design, similar to smartphones and tablets, is an aesthetic fit for the museum providing a sleek, timeless feel that suits the ever-changing museum environment. The industrial grade components and chemically-strengthened glass of the M2467PW offers durable and reliable performance for the demanding high traffic retail environment. The combination of advanced multi-touch functionality, sleek industrial design, premium Full HD LCD, and commercial grade components make the M2467PW the perfect fit for the museum.



24-inch 3M™ Multi-Touch Display M2467PW

The Result

The Science Discovery Museum selected 3M's 24-inch Multi-Touch Display M2467PW as the optimal solution for its interactive discovery center in several exhibits. The highly engaging interactive capabilities of the M2467PW, coupled with exciting multimedia content, enabled the museum to create a significant and educational user experience for visitors. This unique user experience not only allowed the museum to differentiate itself from other venues, but also increased the rate of visitor returns to the museum. After strong positive feedback by membership from the initial roll out, the museum is now looking at additional opportunities to increase interactive content with 3M's multi-touch displays at the museum.

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