

NEC displays help show the way to interactivity for The Field Museum's maps exhibit

Quick Facts

Facility: The Field Museum

Location: Chicago, IL

Challenge: Creating an interactive experience for visitors with the Museum's exhibition, "Maps: Finding Our Place in the World"

Solution: 46" NEC MultiSync LCD4620

Date: November 2007

At Chicago's Field Museum, Exhibitions Department directors are constantly on the lookout for exhibits that will captivate the eyes and interests of its four million visitors every year. This museum, which was incorporated following 1893's World's Columbian Exposition, is known for hosting attractions that not only promote education on natural history and culture, but cleverly portray how far we've come and what the future holds in store.

For its late 2007 temporary exhibition, "Maps: Finding Our Place in the World," Field Museum administrators wanted to

illustrate the history of mapmaking over the last 3000 years, including today's digital possibilities. Five years in the making, the exhibition featured rare and historic maps from 68 lenders in 11 countries, that spanned centuries and levels of sophistication—from clay tablets and sea charts to the latest navigation systems. The exhibition was a once-in-a-lifetime opportunity to see more than 130 of the world's greatest maps, including those from ancient Rome and ancient Babylon, cartographers Leonardo da Vinci and Mercator, as well as the great libraries of the world, including the Vatican Library and the Royal Collection at Windsor Castle. These famous maps are juxtaposed with modern ones, including in-car navigation and handheld systems powered by NAVTEQ.

The Challenge

Field Museum staff, who always look for audio-visual solutions to enliven its projects, wanted to introduce the element of interaction to this exhibition and add a new and current dimension to its content. To assist in their efforts, they collaborated with Accenture, a global management consulting, technology services and outsourcing company, and NAVTEQ, a provider of premium-quality digital map data.



As visitors make their way to the end of The Field Museum's "Maps: Finding Our Place in the World" exhibition, they are greeted by NEC's 3x2 tiled display setup. This solution effectively and creatively illustrates the advancements society has made in mapmaking technology over the centuries.

"As with all new exhibitions, we wanted to create an interactive with fun elements so that it differentiates itself from others," said Todd Tubutis, senior project manager for exhibitions at the Field Museum. "We wanted a high-tech touchscreen display specifically for this exhibition, and that is where Accenture stepped in."

The Museum's challenge of employing interactive displays would be having multiple visitors simultaneously use them. The idea was for multiple displays to be connected in a tiled setup with touch capabilities integrated into the screens. This challenge led NAVTEQ to select Accenture as the solution provider for the interactive element, which took on the task of developing a touchscreen solution that would meet all of the Museum's requirements. Next, NAVTEQ needed to find a display that supported high resolution, crisp colors and the touch requirements set out by Accenture.

The Solution

Due to a successful partnership on past projects, NAVTEQ chose NEC Display Solutions as the display vendor for the maps exhibition because, in addition to meeting its performance requirements, NEC could provide displays with the high-resolution wow factor NAVTEQ and Accenture sought. After selecting NEC for the digital portion of Maps, Accenture decided to use a 3x2 video wall configuration with six of NEC's 46" MultiSync LCD4620 displays, which are fed by three coordinated PCs. Each display acts as a navigational tool, allowing visitors to simultaneously explore different areas of the world. Using a camera-based system with infrared red lights, visitors are able to navigate maps with their finger on the lower screens. The corresponding screens above provide a closer view, whether a user is spanning the entire globe or zooming in to street levels.

"Essentially, a camera in each upper corner of the top screens

is aimed along the surface of the screens," said Kelly Dempski, director of HCI research for Accenture Technology Labs. "These two cameras can see fingers as they touch the screen and use triangulation to find the actual position."

The infrared lights make the finger more apparent without adding extra visible light to the installation. Because the solution scales to very large screens, it doesn't require any sort of overlay on the displays themselves. The result lets multiple users interact with the wayfinding content on the six NEC displays.

"The solution allows the visitors to enjoy the exhibition by investigating the maps, pointing things out to each other and generally exploring more naturally and fluidly than they could on a single user kiosk," said Dempski.

"Our collective effort with NAVTEQ, Accenture and other partners gives museum visitors the opportunity to interact with digital maps and witness firsthand their growing influence on our lives," said Pierre Richer, executive vice president of NEC. "Seeing both old and new map technology side-by-side in this historic exhibit provides a compelling learning experience."

The exhibition's combination of both digital and historical maps has brought an awe-inspiring reaction to all of its visitors. The element of interactivity provided by NEC's large-screen displays has complemented the museum

officials' vision of this remarkable and rare exhibition beyond their expectations.

"We're grateful to partners such as NEC Display Solutions for lending the technology expertise needed to bring modern-day mapping to life in this exhibition," said Tubutis. "The success of this exhibition is great, and the reaction we have received from visitors says it all."



Using their finger, Museum visitors are able to magnify a specific region or zoom in to street level views on NEC's 46" MultiSync LCD4620 displays. With NAVTEQ and Accenture's assistance, this application successfully achieved the Museum's desired level of visitor interaction.