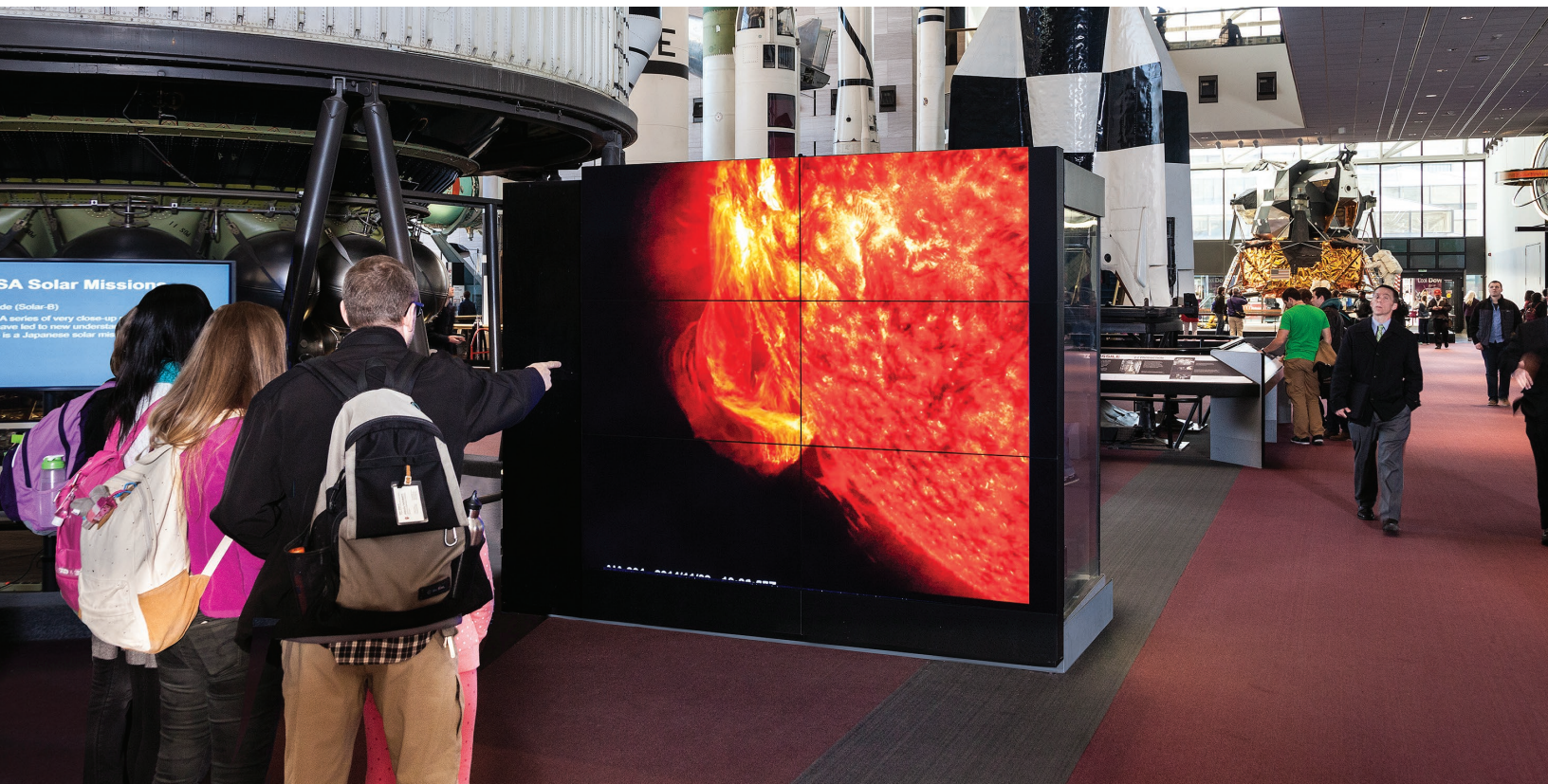




Products

Clarity Matrix Video Wall

Location

Washington, DC

Industry

Museum

Application

Real-Time Data Visualization

CLARITY MATRIX VIDEO WALL VIVIDLY PORTRAYS ULTRA HIGH RESOLUTION TELESCOPIC IMAGES OF ACTIVITY IN SUN'S OUTER ATMOSPHERE

Air & Space Museum

The Smithsonian's National Air and Space Museum maintains the world's largest and most significant collection of aviation and space artifacts, encompassing all aspects of human flight, and is also home of the Center for Earth and Planetary Studies. It follows, not surprisingly, that the museum would as well be involved in the sharing of research about the sun, and helping to explain to its eight million visitors, what is happening on the sun at almost any time of the day or night.

In cooperation with the Harvard-Smithsonian Center for Astrophysics a video wall has been implemented at the museum to depict for visitors large, dramatic images of the sun's outermost atmosphere. These images are captured by telescopes installed on an orbiting NASA satellite, and are transmitted to the Center for Astrophysics, which in turn transmits them to the



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*– Dr. Henry “Trae” Winter,
Astrophysicist, Harvard-Smithsonian
Center for Astrophysics*

Air and Space Museum in Washington where they are displayed on the video wall from Planar Systems.

“These images have been on view at Air and Space but only on a single 50-inch screen and in image sizes averaging approximately 10 inches. Now, they are displayed on the Planar video wall, which is nearly 10 feet high and 15 feet wide, and millions of us can see them in a most dramatic fashion,” says Dr. Henry “Trae” Winter, Astrophysicist at Harvard-Smithsonian Center for Astrophysics. “Planar was the perfect supplier for this video wall because its technology is capable of meeting not only the demanding requirements for ultra-high resolution image display, but also because of its proven track record in the equally challenging museum environment.”

“The Planar video wall is a relevant and useful tool in that it shows the sun’s high energy activities over 48-hour periods and presents them with extraordinary impact,” adds Dr. David DeVorkin, Senior Curator of History of Astronomy and the Space sciences at the National Air and Space Museum. “It is a perfect medium for engaging, exciting and educating our visitors.”

Video wall displays selected for content-handling and image quality capabilities

Drs. Winter and DeVorkin turned to the well-known and respected systems integration firm, Avitecture, for assistance in choosing

the displays for the video wall as well as for exhibit design, installation and integration. The Avitecture team, led by Christopher Hey, recommended Planar's Clarity® Matrix LCD Video Wall System, specifying an array of the 55-inch video wall displays (MX55HDS) in a two-wide by three-high configuration (2x3). These displays were selected because of their high-bright (800-nit) capability, an essential feature given that the video wall was to be installed in a walkway area between the museum's main entrance and the Spaceflight Hall. "This is a low-light area that is perfect for showing the solar images, but only the Clarity Matrix would ensure that these images would be depicted in the most fitting brightness, color and contrast levels in a low-light area such as this," says Hey, Project Manager at Avitecture.

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The plan for the video wall called for it to be installed against a wall in the walkway, as a free-standing exhibit. The free-standing structure is a custom-built steel frame to which the Planar® EasyAxis™ Mounting System is attached. The EasyAxis Mounting System is a one-of-a-kind on the market; it consists of a six-way cam mechanism that facilitates the precise alignment of every display in the video wall such that the viewer-facing surface is completely flat and all spaces between displays are exactly identical in size. "EasyAxis makes mounting and aligning large displays easier and faster than is possible with any other mounting system," Avitecture's Hey says.

Mounting system and distributed electronics support low heat and reliability requirements

Harvard-Smithsonian's Dr. Winter says Clarity Matrix and EasyAxis also met the need for a system that would provide for low power at the video wall itself. "The Clarity Matrix design enables power supplies and controllers to be located in a remote rack room approximately 80 feet away. This keeps heat levels down thus ensuring a long life for the video wall, and it facilitates the maintenance of these components in a controlled environment such that there is no interference with the visitor's viewing experience. We fully expect the video wall to run reliably 24x7x365 for at least five years."

Winter adds that when visitors stand in front of the video wall, they are looking at ultra-high definition images of the sun in eight different temperatures, represented by different colors, as a means of showing a wide variety of solar events that are occurring at any time. Clarity Matrix maximizes the viewing of these images with its 4K content handling capability, 1920 x 1080 resolution, 800-nit brightness, 3500:1 contrast ratio and 5.5mm tiled bezel width. "The content is so vivid and beautiful that people are practically mesmerized by it."