



INSTALLATION PROFILE

University of Illinois at Chicago



HIGHLIGHTS

Location

Chicago, Illinois

Industry

Higher Education

Application

Visualization and
Networking Technologies



PLANAR VIDEO WALL PROVIDES POWERFUL 3D VISUALIZATION SOLUTION

The Electronic Visualization Laboratory (EVL) at the University of Illinois at Chicago (UIC) is a graduate research laboratory that combines art and computer science, specializing in advanced visualization and networking technologies. Its "Cyber-Commons" includes a nearly-cinematic classroom blackboard – comprised of the new Clarity™ Matrix 3D LCD Video Wall by Planar Systems – on which faculty conduct research and demonstrate the benefits of 3D-based collaboration to other universities and commercial companies in a variety of markets.

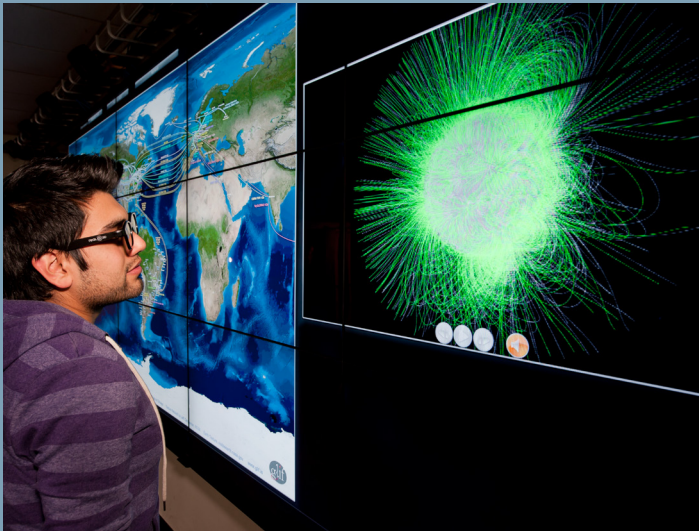
"The Clarity Matrix 3D video wall is a powerful tool with which to communicate ideas," says Jason Leigh, EVL director and UIC professor of computer science. "It lets people work together, make sense of lots of information, and derive insights quicker." Enterprises interested in 3D video wall technology include architectural firms, energy exploration companies, pharmaceutical firms, film and video game producers. "They view our video wall as the standard of leading-edge technology that will improve their ability to visualize their own designs, data sets and models."

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at Chicago

A Leap Forward from Projection System Technology

"The Cyber-Commons wall – currently comprised of 20 Clarity™ Matrix 3D LX46 displays (46-inch ultra-thin panels) – provide a perfectly seamless, color-matched picture," Leigh says.



In applications ranging from game production to molecular visualization, it's all about good color imaging. "Planar designed the Clarity Matrix 3D and its color calibration software to distribute color evenly across the entire video wall. It is a vast improvement over the older-technology projection system we previously used, in which the screens had developed hot and cold spots that made it difficult for us to see the fine detail required in complex data visualizations."

Clarity Matrix 3D further supports EVL's visualization requirements with flicker-free stereoscopic functionality, ultra-high brightness and resolution. This combination of features is important, Leigh

says, in order for lab users to be able to see, in very fine detail, all aspects of objects or images being studied. "Without this bright, very detailed, multi-dimensional view, the research we and others need to conduct would not be possible."

Innovative Mounting System Delivers Many Benefits

Another significant factor in the decision to install the Clarity Matrix 3D video wall is its unique EasyAxis™ Mounting System. The only system of its type on the market, EasyAxis utilizes a series of adjustment cams that make it possible to precisely align all the panels in even the largest of walls, with panel-to-panel gaps of just 7.3mm.

This is critical in the Cyber-Commons wall which was previously outfitted with another vendor's 2D video wall – where the 3D image must be flawless, and the wall surface must be perfectly flat in order to allow for its touch screen application to function properly. "This is probably the best surface we've ever had," Leigh says. "We can manipulate objects and image elements by touch-screen and not be worried that a mis-aligned panel will disrupt the touch screen process."

"Working with Planar is a fantastic experience. It has been more positive than we could have imagined."

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EasyAxis also supports EVL's goals for low cost of maintenance and serviceability. It is designed in such a way that any panel can easily be accessed from an adjacent panel without the entire video wall having to be powered down and dismantled. "This is in stark contrast to the old video-wall system where panels were mounted side-by-side on rods, not unlike a barbeque shish kabob," Leigh says. "Getting to a panel in the center of a row meant turning the system off and sliding panels out in order to access the one requiring service or maintenance - a process that was extremely time-consuming and one that could significantly disrupt work needing to be done using the video wall."

The ultra-thin profile of the Clarity Matrix 3D (less than four inches in depth) is another important feature to the Laboratory's success. Each panel is light-weight, which makes handling much easier, and the thinness allows for precise alignment even in curved installations. "Our wall will ultimately comprise nearly a complete circle, and we know that even in this configuration, we'll enjoy a perfectly-aligned, nearly seamless viewing area," Leigh adds.

Dependability and Reliability

Clarity Matrix 3D is designed with a backlight life of 50,000 hours. This makes it a much more cost-effective solution than the projection system, Leigh adds. "Projector bulbs lasted, on average, only a few thousand hours. When they began to degrade, we had to hire someone to come in and replace them - another process that took too much time and was too costly. With the Clarity Matrix 3D, the backlights maintain their properties for a very long time, and they rarely have to be re-calibrated. This is a huge cost benefit for us, in terms of dependability and reliability."



The Clarity Matrix LCD Video Wall family performs reliably over extended periods of time, as a result of its off-board electronics design. With this innovation, components such as power supplies and fans are removed from a Clarity Matrix panel and are located remotely. In the case of EVL, they are housed in a separate rack room along with EVL's other IT components and systems. "This off-board design preserves the life of our wall by removing from every Clarity Matrix panel, heat-generating elements that could lead to disruptions or failures. Also, it's quieter for those using the wall, it reduces the need for ventilation, and it gives our IT technicians one convenient location from which they can

perform updates, make system changes and troubleshoot problems," Leigh says.

The Planar Experience

When asked to describe what it's like working with Planar, Leigh has a one-word answer: "Fantastic." He continues, however, with the following comparison: "Most mass-producing display companies are only interested in display designs that support their business interests. Planar, on the other hand, is unique in that they will custom-build a display wall that meets your interests. And they'll work with you doing it; sharing knowledge and solving problems in partnership. No other company has worked with us in this manner, and as a result, the experience has been more positive than we could have imagined."