3D VIEW

STEREOGRAPHICS®

StereoGraphics Launches Monitor ZScreen

Delivers Most Advanced Stereoscopic 3D Visualization Overlay for Workstation Displays

In July, StereoGraphics announced the Monitor ZScreen®, a flat-panel overlay for workstation displays that provides true stereoscopic 3D visualization capabilities. For surgical and desktop presentation customers, Monitor ZScreen offers easily sterilized, low-cost eyewear in a passive stereo 3D imaging system.

Similar in appearance to an anti-glare screen mounted on the front of a computer monitor, the ZScreen enables on-screen images to be displayed with realistic depth, making objects appear to have presence in the work-space. For surgery, command and control, small-group presentation and real-time simulation environments, Monitor ZScreen allows users to visualize and interact with 3D elements in a realistic and natural environment.

The Monitor ZScreen is compatible with all stereo-ready software currently on the market and works with all major UNIX platforms, 16- and 32-bit Windows environments, DOS, and Macintosh computers. The product is used in conjunction with lightweight polarized glasses and is optimized to yield the highest-definition stereoscopic images of any passive 3D system on the market.

"Our imperative is to deliver the highest quality, workstation-based stereo imaging products and for years, CrystalEyes® was the only one that met our standards," said Lenny Lipton, founder, chairman and chief technical officer for StereoGraphics. "With Monitor ZScreen, we now have two solutions. The ZScreen achieves what no other device of its kind has been able to yield, stunning and visually rich stereoscopic images with a high dynamic range and no unwanted artifacts."

CONTEST EXTENDED!

In the July edition of 3Dview we announced a contest for our readers where we wanted to see the best stereo pictures (still or .avi animations) for use with our SimulEyes glasses as produced by our users. We have had an outstanding response to the Best App of the Month (BAM) contest and have had several requests to extend the deadline so more entries could be delivered…so we've decided to extend the deadline date to October 31!

Once again, the criteria for the BAM is:
- Stereoscopic views exhibiting out-of-screen and into-screen parallax
- File types: BMPs, JPGs, or AVIs encapsulating BMPs or JPGs
- Submit files electronically to: develop@crystaleye.com

A copy of the Java software tool Symantec Café will be awarded to the

CALENDAR OF EVENTS

Look for StereoGraphics products and/or exhibits at these upcoming trade shows:

Autofact	11/4-11/6	Detroit, MI
Fall Comdex	11/16-11/21	Las Vegas, NV

StereoGraphics would like to support you in your trade show efforts. If you are interested in exhibiting your stereo-ready software, please do not hesitate to contact us and we will provide you with SimulEyes, CrystalEyes or Monitor ZScreen for each workstation showing stereo-ready applications.

In This Issue

SPOTLIGHT:

**StereoGraphics Shines
Brightly at Siggraph '97**
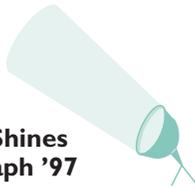
As long as there has been a Siggraph, StereoGraphics has been there to show the world how 3D imaging is done. In fact, StereoGraphics' CrystalEyes has become a perennial favorite among show exhibitors to increase the appeal of their own hardware and software products and attract attendees to their displays.

This year was no different. In fact, StereoGraphics products were shown in more booths than in any previous year. With projection tables such as Pyramid Systems' ImmersaDesk, BARCO's Baron and the FakeSpace Immersive Workbench, a Pyramid Systems' CAVE, several 20-seat theaters and many more four and five-unit displays throughout the show, CrystalEyes was one of the most popular peripherals at the show.

In addition to the company's widespread presence at the show, StereoGraphics made some significant announcements with key partners. One of the most important was an extension of StereoGraphics' partnership with Hewlett-Packard, announcing that HP would be supporting CrystalEyes in both its new Visualize PxFl graphics supercomputer and in its Direct Model 3D graphics API. This signifies an across-the-board endorsement by Hewlett-Packard for stereo-3D imaging in all of its high-end visual applications.

In particular, the concept of virtual prototyping, as a key component of product development and manufacturing, was an overriding theme in many booths, including HP's. With a fast-growing manufacturing user base, the joint announcement between StereoGraphics and Hewlett-Packard was timely, showing these customers a clear roadmap of what their design environments will be like in the near future.

CTO's Report

Virtual Prototyping

I've just returned from Siggraph '97 where our CrystalEyes product was in nearly ten percent of the booths on the show floor. It was a gratifying experience to have such acceptance and I was fascinated to see CrystalEyes used in ways I had never envisioned.

Today, CrystalEyes is being used for virtual prototyping, which can be done with a conventional monitor. But what caught my eye was the use of CrystalEyes in conjunction with eye-filling projection and head tracking, in the CAVE™ and on the projection tables. It is encouraging that these are available as products from vendors like Pyramid Systems, BARCO and Fakespace.

In the CAVE, distributed by Pyramid Systems, a cube ten feet on a side uses four projectors to cover the walls and floor with stereoscopic computer generated images. At past Siggraph shows, General Motors demonstrated the virtual prototyping of an automobile interior, which may well be the most spectacular example of the art ever seen. When you are wearing a pair of CrystalEyes, the walls disappear and you are in an entirely different reality.

The projection table is on a smaller scale, but no less spectacular (Immersadesk by Fakespace, Immersive Workbench by Pyramid Systems and Baron by BARCO). It uses a rear projected stereo image on a table-like surface in close proximity to a user wearing CrystalEyes. The desktop or table-top may be horizontal or tipped forward.

The most interesting example I saw at Siggraph, out of at least half a dozen examples, was at the BARCO booth with software prepared by Fraunhofer CRCG. I saw a virtual battlefield laid out on a stereoscopic topographic map with aircraft hovering above the rolling hills. It was a beautiful display that ought to make any General happy.

So, to all of our partners who helped make CrystalEyes so prominent and make our flagship product look so good, I offer my thanks and congratulations for recognizing the value of showing people images as they ought to be seen.

Lenny Lipton
Founder, Chief Technical Officer

In addition, StereoGraphics made an important impression on Windows NT customers, proving once again that breadth of applications and platform flexibility that are company hallmarks. StereoGraphics and Real 3D announced that Real 3D's graphics processors and forthcoming graphics boards will all support stereo imaging and CrystalEyes. In addition, the company announced a bundling agreement with Dynamic Pictures, who will distribute CrystalEyes with its Oxygen family of Windows NT OpenGL accelerators.

Another show favorite was StereoGraphics' newly announced Monitor ZScreen. On display in the Intergraph booth, the monitor ZScreen showed attendees new capabilities in stereoscopic display never before available in a passive system. And, visitors to the SGI booth had the opportunity to see the latest Mars images in stereo using CrystalEyes; the same product used by NASA scientists on the Pathfinder mission to drive the Sojourner rover and to interpret geologic information.

StereoGraphics would like to thank everyone who helped make Siggraph a success and we look forward to exhibiting with you next year.

IN THE NEWS

Dynamic Pictures to bundle Stereographics' Crystaleyes with the Oxygen 3D Graphics Accelerator line

StereoGraphics announced that Dynamic Pictures Inc. will bundle and distribute the StereoGraphics CrystalEyes family of stereo 3D visualization products. In addition to high-performance stereoscopic output, the Dynamic Pictures® Oxygen™ 3D Family of Open GL® graphics accelerators currently provides direct connectivity for CrystalEyes, making the combined offerings an ideal solution for advanced 3D imaging. Dynamic Pictures' 3D cards have been specifically designed to support stereo 3D. "Dynamic Pictures is pleased to offer its customers the 3D stereoscopic viewing capabilities that have largely been available only on high-end UNIX workstations," said Dinesh Sharma, vice president of marketing for Dynamic pictures. "StereoGraphics is the dominant player in 3D imaging and we believe this partnership extends our position as the value and performance leader in this segment.

StereoGraphics Announces Direct Support for CrystalEyes in HP's New VISUALIZE PxFl Graphics

StereoGraphics announced enhancements to its long relationship with Hewlett-Packard Company in the area of visual computing and virtual prototyping. StereoGraphics' CrystalEyes product will be directly supported by HP's newly announced HP VISUALIZE PxFl high-performance graphics system. A long-standing proponent of stereoscopic imaging, HP designed this functionality into its high-performance VISUALIZE workstations from the very beginning. Delivering unsurpassed performance and 3D visualization capabilities, the combination of StereoGraphics' CrystalEyes and the HP VISUALIZE PxFl are ideal for high-end mechanical computer-aided design and engineering (MCAD/MCAE) engineers in automotive and aerospace, as well as in architecture, engineering and construction (AEC) markets. Moreover, with stereo support available in HP's DirectModel toolkit, all new applications running on HP workstations will be able to support CrystalEyes.

StereoGraphics and Real 3D to Support Stereoscopic Imaging on High Performance 3D Systems

StereoGraphics announced at the Siggraph '97 conference they are working with Real 3D to deliver 3D rendering silicon and imaging peripherals that enable high-definition stereoscopic display. The companies will integrate StereoGraphics' CrystalEyes™ eyewear system with Real 3D's LIGHTNING/110 graphics accelerator board to deliver stereoscopic viewing capabilities for the professional and entertainment markets." Real 3D has proven itself to be a leading 3D graphics technology provider, and is a critical partner in our effort to advance stereo imaging as a standard element of visual computing," said Bob Seltzer, director of sales and marketing, StereoGraphics. "Built-in stereo support from Real 3D makes it easy for customers to add stereo viewing devices to their systems."

MONITOR ZSCREEN LAUNCH
continued from front page

In conjunction with stereo-ready software, the ZScreen circularly polarizes the left and right eye images in opposing directions. When passive polarized glasses are worn, these independent images are transmitted to each eye and the viewer sees a realistic 3D picture. In addition, the ZScreen is microprocessor controlled to maximize stereoscopic image quality and eliminate unwanted

artifacts such as on-screen banding and visible segmentation lines, which are present in competitive products.

"StereoGraphics' new Monitor ZScreen is a significant advance in practical and comfortable 3D imaging," said Dr. Samuel Rod, president of the Bristlecone Corporation, an environmental technologies integrator and specialist in stereoscopic technology. "Its image is the sharpest I've seen of any 3D polarizing device and it sets a new standard for real-time stereo 3D visualization."

StereoGraphics has been the leader in providing electronic stereoscopic display solutions since its beginning in 1980. Its flagship stereo display product, CrystalEyes, is currently in use by over 50,000 professionals who work with three-dimensional visual data. StereoGraphics' Monitor ZScreen is compatible with all applications and platforms that support CrystalEyes, giving all current and future customers a broad range of available software and hardware

3DVIEW

Contact StereoGraphics

Questions or comments? Please use the e-mail aliases below to contact us.

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Attention! 3DVIEW is now available electronically—email develop@crystaleye.com to be added to the mailing list.

MONITOR ZSCREEN LAUNCH

to use with ZScreen. The product includes the Monitor ZScreen panel, electronic control box and three pair of polarized glasses. The product receives its sync signal from stereo-ready workstations via an industry standard BNC connector.

Users with stereo-ready computers can purchase adapter cables from StereoGraphics to convert CrystalEyes emitter connectors to BNC when necessary. Computers not directly providing a stereo sync signal can utilize the company's GDC 3 or Sync Doubling Emitter products for above/below stereo format display. "I'm most pleased with the ZScreen's adaptability to many different applications," said Dr. Rod "For example, I've successfully incorporated ZScreen right out of the box to both high-frequency, non-interlaced and low-frequency, interlaced images in video and still-image modes. Moreover, it was easily connected to numerous makes of graphics boards and different computer platforms. It's basically plug-and-play."

CONTEST EXTENDED!

winner and the winning entry will be uploaded for viewing on our website. We want to thank all of the participants to date, for taking the time to submit their entries on time. We look forward to seeing the rest!