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New haptics systems challenge stroke patients to grasp, pinch, squeeze their way to recovery

3D-News Posted: Friday, May 27, 2005 (8:33 UTC) | **Posted By:** Webmaster

Stroke patients who face months of tedious rehabilitation to regain the use of impaired limbs may benefit from new haptics systems - interfaces that add the sense of touch to virtual computer environments - in development at the University of Southern California's Integrated Media Systems Center (IMSC).

The new systems, being designed by an interdisciplinary team of researchers from the Viterbi School of Engineering and the Annenberg School for Communication, are challenging stroke patients to grasp, pinch, squeeze, throw and push their way to recovery.

With a $1.8-million grant from the National Institutes of Health (NIH), the team has come up with quite an assortment of new applications. Some are designed to make stroke survivors stack, push or pour liquid out of three-dimensional objects in immersive environments, while other tasks force them to pick up objects and move them through cyberspace corridors without bumping into walls or falling into booby traps.

"Haptics, which adds the sense of touch to 3-D computing, lets stroke patients interact with virtual worlds by feel," said Margaret McLaughlin, an IMSC investigator and professor of communication at the USC Annenberg School for Communication. "The big advantage is that we can control the environment and design cyber tasks that target each patient's impairment."

McLaughlin, who is a co-editor of Touch in Virtual Environments, works with researchers at the Keck School of Medicine of USC to design the new haptics technologies.

"The technology got its start in commercial gaming, with the debut of inexpensive, non-immersive versions using force-feedback joysticks and steering wheels that vibrated as the driver sped along a video racetrack," she said. "But in university laboratories, the availability of more sensitive, high-end devices that could render touch sensations in three dimensions quickly led to applications in more serious pursuits."

Haptics interfaces began to emerge in such fields as medical and surgical training programs, flight school, teleoperations and scientific visualization. In 2004, NIH saw a need for the technology among stroke survivors, said principal investigator Thomas McNeill, professor of cell and neurobiology, neurology and neurogerontology at the Keck School, and awarded USC and the University of Texas, Austin, a grant to pursue the work.

"More than 700,000 people suffer a stroke each year and nearly 450,000 survive with some form of neurologic impairment or disability," NcNeill said. Those numbers will grow, he added, as the population ages and obesity and heart disease increase, making innovative rehabilitation programs "a national priority" in the next 50 years.

A group of interdisciplinary faculty and Ph.D. students in IMSC's Haptics and Virtual Environments Lab - including McLaughlin , Albert "Skip" Rizzo, Younbo Jung, Wei Peng, Shih-Ching Yeh and Weirong Zhu - went to work on the applications.

"Designing one is very much like creating an aircraft simulator to test and train pilots," said Rizzo, who is currently a research scientist at USC's Institute for Creative Technologies. "But now we've created simulations that can assess and rehabilitate a stroke patient under a range of stimulus conditions. These are conditions that aren't easily deliverable or controllable in the real world."

The haptics interfaces have descriptive names, such as "space tube," "pincher" or "mutual touch," which tell users what they do. In addition, each cyber task targets specific eye-motor coordination skills and measures the user's movements in real time.

"Pincher" is designed for two-fingertip contact with virtual objects, said Shih-Ching Yeh and Weirong Zhu, both computer programmers and graduate students in the Annenberg School of Communications.

The interface works like this: The user dons a pair of stereoscopic goggles and puts a thimble on the forefinger; the thimble is connected to a robotic force-feed device, called a PHANToM. The stylus of a second PHANToM is affixed to the thumb. The two PHANToMs provide the sensation of force to the user's fingertips as (s)he tries to pick up a three-dimensional cube and squeeze it small enough to fit through a narrow hole on the computer screen.

Another emerging interface is a "mutual touch" task for hand-reaching and grasping exercises. This therapeutic environment utilizes a "cyber grasp" exoskeleton, which fits over an instrumented data glove, to measure the position and orientation of the hand in a three-dimensional space.

"The glove allows patients to feel the sensation of a solid object in their palms," said Yeh, who develops some of the "special effects" computer graphics for these interfaces. "Among the tasks they might be able to perform are picking up a glass and inverting it to pour the liquid out or picking up books and stacking them on appropriate shelves."

The interfaces give physical therapists precise control over a stroke patient's exercise program, which is key to recovery, said Younbo Jung, another member of the team and a graduate student in communications.

"We can tailor rehabilitative tasks, like pouring milk out of a glass, to each patient, depending on what level of impairment they have sustained," McLaughlin added. "We also get information on their performance instantly, which helps the therapist to design a rehabilitative program of increasing difficulty. "

In pilot studies at the USC Keck School - led by Carolee Winstein, professor of biokinesiology and physical therapy and co-principal investigator on the NIH grant, and Ph.D. student Jill Stewart - stroke patients are trying out these prototypes.

So far, they have reported "overall satisfaction" with all of the new cyber tasks, said McLaughlin. In one instance, a volunteer was "extremely enthusiastic about the space tube task and said she wanted to use the system at home."

That is critical to post-stroke recovery. "It's not easy to keep patients motivated and engaged in daily, repetitive exercises," McLaughlin said, "so if they are enjoying the tasks, they're likely to do better during rehabilitation."

Philips reveals 3D display processor for mobile phones

3D-News Posted: Tuesday, May 24, 2005 (19:01 UTC) | **Posted By:** Webmaster

Philips 3D Solutions, a subsidiary of Royal Philips Electronics NV (Amsterdam, The Netherlands), has announced it is working on a graphics chip to drive flat displays to give three dimensional images on cell phones. It would do this without the need for special viewing glasses although it does require a specially adapted LCD, the company said. The company launched its IC3D graphics chip design at the Society of Information Display International Symposium taking place in Boston, Massachusetts, Tuesday (May 24).

Philips 3D Solutions has developed multi-view 3D display solutions based on Lenticular lens technology, which is an array of transparent lenses fixed on a standard LCD panel, the company said.

The graphics chip performs the real-time rendering and interweaving of 2D and depth information into the 3D image. Without this display signal processing, a 3D display can only show static, pre-rendered content such as pictures and logos. The IC3D could also be used for color processing, scaling, and real-time depth calculation for 2D content, Philips 3D Solutions said.

The IC3D chip could be integrated into the display module of a handset or in the back end of a handset's application engine. It is also possible to integrate the same functionality as an IP block into a multimedia application engine, Philips 3D Solutions said.

Engineering samples of the IC3D chip are dur to become available in the fourth quarter of 2005 with volume shipments due to follow in Q1 2006 to selected customers.

Storytelling in Virtual Environments

3D-News Posted: Tuesday, May 24, 2005 (4:38 UTC) | **Posted By:** Webmaster

Armed with the latest in Virtual Reality (VR), museums can entertain visitors far and wide. Over a third of the people who tested a new interactive and 3D system –flying over a Greek gorge or touring an ancient Asian temple – said their experience was better than a real trip.

"The VR market is just beginning in museums," says Dr Manfred Bogen, coordinator of the European IST project DHX. "But it has a great future in cultural and natural heritage institutions, offering visitors an intense and emotional experience."

Using their own system – mainly projectors, screens, audio and computer equipment – the partners created several guided tours. Adds Bogen: "Besides the gorge and temple, we developed virtual tours of Pisa’s Baptistery building, Milan’s Piccolo theatre as it was in the 19th century and a tour about German composer Ludwig van Beethoven. All of these have lifelike, stereoscopic and interactive animation, and people can interact with them with touch displays or joysticks."

Uniquely, the system allows museums to form networks and create, share and disseminate cultural heritage. In a recent live demonstration in Milan, the European project partners linked up with their Korean partner over a broadband line for a virtual visit of the Yellow Dragon Temple. Participants in various places interacted with the display, while guided by an expert in

Milan.

"By being part of an open network, a museum with a VR system such as DHX can tap into digital heritage worldwide," says Bogen. "The content databases held at one institution can be customised for display at any other."

Visitors of the DHX demonstrations rated them as excellent for their 'presence, ambience and dynamics' and good on visual details. Some were impressed by the 3D environment or the ability to see scenes from different viewpoints. Others wanted to be able to move around scenes more or for objects to look more realistic.

"Our virtual platform is ideal for museums that may have large collections, but limited space and money," says Bogen. "Visitors would prefer to see everything available in a museum, presented in the right context. With VR and suitable software, such as our storytelling and guided tour tools which assist with new exhibition planning, museums could break into the emerging world of edutainment."

With some 43,000 museums worldwide, there is a huge market for so-called immersive display solutions. But few can afford VR systems, which come with four-figure tickets for basic systems and up to six figures for sophisticated displays for large theatres.

"Prices are coming down and a VR system will run on a high-end PC with a good graphics card," says Bogen. "But you also need the right tools, such as storytelling software."

Results of the project will be highlighted in Kuurne, Belgium, where technology partner Barco will demonstrate the DHX system, and in the permanent showcase in Crete's new Natural History Museum in late 2005.

Each partner has committed to be a reference partner for Barco, to spread the news about the project technology. "We are showing our products to interested companies and institutions," adds Bogen. "The complete package is not for sale, but it is possible to purchase individual components such as the Logical Storytelling Designer."

Arizona State University's decision theater ushers in new age in public policy

3D-News Posted: Friday, May 20, 2005 (17:46 UTC) | **Posted By:** Webmaster

A new age is dawning on public policy, one based on advanced scientifically informed decision making, with the May 23 opening of the Decision Theater at Arizona State University.

The Decision Theater is an advanced visualization environment that will enable policymakers and others to see in detailed three-dimensional representation the consequences of their actions. It will feature a 260-degree "immersive environment" where researchers will literally see the effects of public policy decisions played out before them.

"The Decision Theater is an exciting new concept that melds science with public policy in a novel way, which we expect will have a huge impact in a number of socially important areas," said ASU President Michael Crow. "The Decision Theater will provide informed analysis based on scientific evidence to key public policy experts, who then can use that analysis on which to

discuss issues and provide a basis for sound policy decisions."

As a tool designed to aid the public, the Decision Theater will focus on real-world issues relevant to today's society. Using computer models and computer visualization techniques, the Decision Theater at Arizona State University will enable researchers to test the outcomes of decisions made today on such topics as urban growth and water usage, and the effects of policy decisions on public health and on a myriad of environmental and social challenges.

"We are connecting science to the community with this new facility," said Decision Theater Executive Director Rick Shangraw. "The Decision Theater will be an important resource for policy makers by providing interactive forums to identify and assess probable outcomes of real world decisions, review the potential impacts of varying policy decisions, and provide visualizations of alternative future scenarios and scientific analyses produced by complex and integrated computer models.

The Decision Theater will be used in several targeted research areas, including:

- Enabling policy makers, business leaders and government officials to explore the outcomes of possible scenarios of urban development, such as water availability, urban heating, land use patterns, transportation networks, air quality and homeland security.
- As a forum where decision makers and scientists meet to discuss and explore integrated environmental, economic and social challenges to arrive at optimal decisions through the use of models and dialogue.
- In simulation games, or "what if" scenarios, to model and visualize otherwise unimaginable future outcomes of the many factors that affect our society and possible "breaking points" of our critical infrastructure. For example, ASU researchers will be able to simulate metropolitan Phoenix in the year 2040, when it is expected to include a population of 7 million people, by inputting the known and expected growth patterns and associated demands for water and other natural resources.

Decision Theater will be a key tool to be used by researchers who are part of the Decision Center for a Desert City, a recently funded $6.9 million National Science Foundation center at ASU. Decision Theater is located in the Brickyard complex in downtown Tempe.

At the core of Decision Theater is the "drum," a theater area for up to 20 people, a significant advance in three-dimensional immersive environments, which are usually limited in the number of participants. In the Decision Theater, groups of people can experience the simulations in the drum and then use the analysis towards more informed decision-making.

The Decision Theater employs seven digital-image projectors back projecting stereo images onto seven high definition screens to achieve the 260-degree image surround. Hardware design and system set up is provided by Fakespace Systems Inc., Marshalltown, Iowa, a leader in Virtual Reality and immersive environments.

"ASU will have one of the highest performing and most state-of-the-art virtual reality systems in existence today," said Chris Clover, president and CEO of Fakespace Systems Inc. "The ASU system will have the largest number of stereoscopic imaging channels with advanced high resolution and high brightness projectors with more than 10 million pixels (7 channels at 1400x1050 resolution and more than 7,000 lumens of brightness each) to be installed and

integrated in the virtual reality field.

"What also makes the ASU system unique is its use of advanced PCI Express video graphics technology from NVIDIA Inc., into a 7-node PC cluster," Clover added. "This will be one of the earliest systems to make use of this technology, especially in a multi-channel virtual reality system. Fakespace is proud to be a key partner in deploying this system."

Anshuman Razdan, director of research and technology at the Decision Theater said a key capability of the facility is its ability to incorporate and integrate complex multi-dimensional data from a variety of sources, such as numeric and spatial data, into models and simulations for display in an immersive environment.

"With this data fusion, we can take data from different sources, which oftentimes are gathered and presented in specific and varying ways, and integrate them to provide a complete picture of the scenario we are monitoring or simulating," Razdan said.

Initial funding for the Decision Theater came from Ira A. Fulton ($3 million) and ASU, ($3 million). Shangraw said they are looking into additional individual and corporate sponsors for the facility with the overall goal for it to become self sufficient in a couple of years.

Decision Theater researchers already have begun one project with the East Valley Water Forum, a regional cooperative of city planning managers in the eastern suburbs of Phoenix. This group is developing data driven scenarios for ground water policy issues under a variety of drought scenarios. These scenarios will allow decision makers to investigate options and potential impacts of coordinated water management plans. Their work will assist them in reaching informed planning decisions as the eastern portion of Maricopa County continues its explosive growth.

Shangraw says officials at Decision Theater also are in discussions with federal agencies on additional uses for the Decision Theater.

"This powerful tool will be an important element to any public policy researcher or agency that needs to project the impact of their decisions into the future," Shangraw explained. "The Decision Theater will help those people understand the full extent of their policy decisions and help provide scientifically based informed analysis that has never been available before in this type of forum."

Italian police investigators use SGI virtual reality system to re-create crime scenes

3D-News Posted: Monday, May 16, 2005 (18:31 UTC) | **Posted By:** Webmaster

A forensics laboratory in Rome is using a sophisticated computer system to reproduce crime scenes, re-creating everything from the path of a bullet to the movement of a corpse with startling realism. The first-of-its-kind system, powered by a visualization system from Silicon Graphics, is located at Rome's RiTriDEC (Ricostruzione Tridimensionale della Dinamica dell'Evento Criminale) laboratory.

The system is believed to be the most advanced Virtual Reality theater dedicated to criminal analysis. It is operated by the investigating unit of the Italian state police: the Polizia Scientifica Italiana's Unita' per l'Analisi del Crimine Violento, which is known for its ability to solve international murders.

"One of the systems' biggest advantages is in reenacting the event through the eyes of different witnesses: to evaluate the reliability of a deposition or to check on particular conditions of a crime scene," Carlo Bui, who supervises the project, said. "It helps us answer very specific questions: What could the victim see? What could the witness see? What was the distance between, say, the door and the couch?"

Bui said that the system powered by SGI is especially good at representing complex events such as a projectile trajectory, making a ballistics expert's calculations readily understandable to others. Detectives can even view the screen stereoscopically using special glasses, synchronized to the computer through an infrared signal.

At the heart of the Reality Center is a six-processor SGI Onyx 350 InfiniteReality4 graphics system computer, which manages three Barco projectors, as well as the acoustic and stereoscopic systems. Images are displayed on an 18-by- 7-foot floor-level screen, large enough to recreate the actual crime with startling realism.

The virtual 3D crime scenes help investigators visualize everything from on-the-spot written records to laser-produced measurements--even accepting video from closed circuit cameras. Bullet trajectories, blood drops, and the movement of corpses can all be animated. Objects can be placed in absolute or relative position to a victim, aggressor, or witness. The SGI system can cross-check dimensions for accuracy and calculate the exact angle of the sun. The turnaround from raw data to completed 3D model is fast: typically within 24 hours.

"In studying the scene of a crime, an investigator must behave like an art critic," says Bui. "It is like analyzing a picture-it is important to grasp even the smallest details within the scene. SGI's advanced graphics solutions allow us to reproduce even tiny details, like a reflection on a glossy surface."

Officials from Polizia Scientifica Italiana's Unita' per l'Analisi del Crimine Violento will present the keynote speech at the upcoming SGI User Group 2005 Conference, June 13 - 16 in Munich, Germany.

For more information see http://www.sgi.com/company_info/events/sgiug2005.html

Stereoscopy.com becomes Associate Member of 3D Consortium

3D-News Posted: Sunday, May 15, 2005 (7:49 UTC) | **Posted By:** Webmaster

3Dコンソーシアム
映像表現の"夢"の実現に向けて

3DCONSORTIUM
Achieving the "dream" of image expression

Stereoscopy.com is now an associate member of 3D Consortium. 5 companies (Itochu, NTT Data, Sanyo Electric Company, Sharp and Sony) set up the organisation, with the aim of developing 3D stereoscopic display input and output devices and increasing their take-up, promoting expansion of 3D contents and improving distribution and contributing to the expansion and development of the 3D market.

The 3D Consortium comprises more than 70 companies in all - including the 5 executive companies (originators), and 65 standard members including hardware manufacturers, software vendors, contents vendors, contents providers, systems integrators, image production, broadcasting agencies, academic organsiations.

Sections will be set up within the Consortium to discuss specific topics such as activities to promote image format in accordance with the various uses and in/output devices, guidelines for when making contents and authoring tools etc. The Consortium intends to expand overseas as well and to positively promote activities towards expanding take-up of 3D. It aims to create a new industry that has not existed hitherto in the 3D market.

For more information, see http://www.3dc.gr.jp/english/index.html.

New, inexpensive 3D displays for the markets of the future

3D-News Posted: Thursday, May 12, 2005 (16:21 UTC) | **Posted By:** Webmaster

Toronto and Dresden based Canadian-German company group Spatial View announced the formation of a joint venture, Spatial View Manufacturing Sdn.Bhd. The new venture, based in Penang, Malaysia takes on the manufacture of lithographic-optical elements for 3D displays.

The displays, produced by the partner Inventec Electronics Sdn. Bhd. Multimedia and Telecom (InventecMT) using Spatial View technology and software, make genuine 3D experiences possible for viewers - without additional aids of any kind, such as red-green or shutter glasses. The objects or scenes portrayed no longer lie flat on the screen, but appear three-dimensionally in the space in front of the display or in the space behind it.

This is no longer a distant vision of the future; it is reality:
The InventecMT/Spatial View displays offer a spatial reproduction of three-dimensional content. They will soon be a part of everyday life - at the work places of design engineers, architects and designers, in medical diagnosis and preparation for surgery, in education, in advertising and in the modern mass-media - because these displays will be available at reasonable prices, starting at significantly less than 1000 Euro.

Two sizes - 17" and 26" versions of the monitors will be produced, using technology based on a barrier process (parallax barrier). In this process, parts of the visible surface are deliberately blocked on the LCD screen in order to make the 3D effect possible. The barrier structure is so fine that the viewer does not perceive it. These screens make three-dimensional vision possible with the naked eye over a range of viewing angles and positions, and offer high picture-quality with brilliant resolution and depth of colour.

Availability of the 3D displays in large numbers and at reasonable prices will raise basic means of working and communicating with the computer to a new level of quality. For example, great potential for saving working time and costs will arise as a result of larger work-teams now being able to assess virtual prototypes simultaneously as they are generated by "genuine" three-dimensional (true-space) visualisation of 3D engineering or design data.

Spatial visualisation of the data from endoscopes, microscopes, ultra-sound equipment and computer-tomographs makes it possible to undertake diagnoses and surgical interventions (minimal-invasive surgery) with far greater safety and quality than has previously been possible.

Many different fields of application already exist and there will be even more in the near future; practically every object that can be seen on computer monitors or television screens can become a three-dimensional experience. Topographical relief-maps, sculptures in a virtual museum, electronic books, educational material, digital advertising media and in future perhaps home entertainment - DVD, computer games, 3D television ... the time is ripe, and the possibilities are endless.

Former President and CEO of United Cinemas International Joseph Peixoto joins REAL D

3D-News Posted: Thursday, May 12, 2005 (16:16 UTC) | **Posted By:** Webmaster

REAL D, a leader in the delivery of premium digital 3D entertainment, announced today that former United Cinemas International (UCI) President and Chief Executive Officer Joseph Peixoto has joined the company as President of Worldwide Cinema, REAL D, where he will manage relationships with exhibitors, studios and content creators. Peixoto will also be responsible for expanding REAL D's cinematic footprint globally as the company works towards its goal of converting more than 1,000 theaters to REAL D theaters by 2006.

As a recognized leader in the entertainment community, Peixoto was name "International Exhibitor of the Year" by Cinema Expo International in 1999. While at UCI - previously owned by Paramount Studios and Universal Studios – Peixoto led the expansion of the company to 12 territories operating more than 1,100 screens, including most countries in Western Europe, Brazil and Japan. Prior to UCI, Peixoto served as President of Famous Players, a Canadian theater chain. Peixoto will report directly to REAL D Chairman Michael V. Lewis.

"Joseph is heralded for his forward-thinking strategies that have shaped the cinematic landscape," said Michael V. Lewis, Chairman, REAL D. "As theater owners, content creators and studios convert from analog to digital cinema, Joseph's appreciation of how technology can advance the exhibition industry makes him an excellent addition to REAL D."

"I'm eager to help shepherd the next cinematic evolution as part of the REAL D team," said Peixoto. "REAL D will help exhibitors meet tomorrow's challenges by further differentiating the out-of-home movie-going experience."

REAL D provides exhibitors with a variety of solutions for the delivery of premium digital 3D content, including movies; presentation of alternative programming, such as live concerts and sporting events; and, high-impact advertising. Because REAL D's proprietary stereoscopic hardware and software integrates seamlessly with Digital Cinema Initiative (DCI) complaint projectors, exhibitors avoid the cumbersome and costly technology associated with traditional, analog delivery of 3D content. As part of REAL D's licensing partnership with exhibitors, REAL D provides and maintains all equipment necessary for the flawless delivery of 3D content.

Most exhibitors prefer REAL D's elegant and easy-to-use solution that allows the highest quality stereoscopic content to be played using a single digital projector and passive polarized glasses that are lightweight and styled like sunglasses. As the inventor and world's leading manufacturer of shutterglasses, REAL D also provides exhibitors with 3D technology that uses active polarized lenses.

Zebra Imaging, Inc. Releases High-Speed Monochrome Imager Model M1 for Production of 3D Holographic Images

3D-News Posted: Wednesday, May 11, 2005 (14:09 UTC) | **Posted By:** Webmaster

Today Zebra Imaging unveiled its unique high-speed monochrome imager, allowing for the rapid production of digital holographic images at previously unattainable speeds. Zebra's first commercial Imager Model M1 allows for the production of monochrome, high-resolution full-

parallax digital holographic images in 20 minutes per square foot and they can be tabletop or wall images. This new technology permits quick, on location holographic image production from CAD data, GIS data or any other 3D data source. The holographic image produced is an exact representation of the digital data.
Zebra Imaging has selected three target markets for its initial focus; defense, intelligence and homeland security; automotive and large manufacturing; and city planning and architecture.

Holographic images, used as a 3D visualization tool instead of physical models, cuts time to manufacturing by three-quarters or more, and cuts costs by as much as two-thirds.

Holographic images are also extremely valuable in 3D visualization of urban and non-urban terrain. Soldiers can see sniper nests and exposure threats just as if they were there. Applications include planning, operations, and reconstruction. A Defense Department Official quoted in Forbes Magazine May 9, 2005, said, "You miss an awful lot with a 2D picture. The holographic image puts you right in a place before you've been there. They provide what we call situational awareness." Zebra Holography allows for the deja vu effect above and below ground in true 3D without special viewing goggles, glasses or equipment.

Zebra's high-speed monochrome Imager Model M1 creates holographic images on a special film that can be cut to smaller sizes or tiled together to make larger images. The holographic images are lightweight, portable and viewable with a single light source such as a flashlight, halogen lamp or the sun. Zebra's images are scalable to any size, can contain multiple unique images and animated sequences.

The range of applications for the Zebra Imager Model M1 is broad; including such uses as:

- Defense and intelligence
- Anti-urban terrorism
- Visualization/verification of engineering designs
- Manufacturing designs and prototyping
- Seismic data visualization
- Oil and gas upstream visualization
- Nanotechnology, pharmaceuticals, medical and microscopy imagery
- City planning and architecture
- Marketing and entertainment

"The release of the Zebra Imager Model M1 changes the face of holographic imaging. For the first time, customers can produce their own images with their own data, cutting costs and quickly addressing their 3D visualization needs in the planning and design process," said Robin Curle, President, CEO and Chairman of Zebra Imaging, Inc. The Zebra Imager Model M1 is available today for purchase and deployment to key customers for internal use, or for use for customers through a service offering by Zebra. Zebra is also able to produce full color imagery at the Zebra Image Center located in Austin, Texas.

The Polar Express: an IMAX 3D Experience Back on Track to IMAX Theatres in November 2005

3D-News Posted: Friday, May 6, 2005 (13:53 UTC) | **Posted By:** Webmaster

Unprecedented Success of First Run Brings Highest Grossing Digitally Re-Mastered IMAX Release Back for Another Holiday Season

IMAX Corporation and Warner Bros. Pictures today announced that The Polar Express: An IMAX 3D Experience, the highest grossing and most successful IMAX DMR® (Digital Re-mastering) release to date, will return to IMAX® theatres in November 2005. First released on November 10, 2004, and co-financed by Shangri-La Entertainment, the film broke virtually every box-office record for a digitally re-mastered Hollywood film in IMAX's format, and set the record for the highest grossing week in IMAX's 35-year history. The IMAX® 3D version of The Polar Express has grossed an estimated $45 million to date, including more than $10 million on just 22 international screens, for a cumulative per-screen average of more than $520,000. The film continued to post sold-out shows across the IMAX theatre network well after the holidays, registering a per-screen average of more than $100,000 in January 2005.

"The Polar Express generated remarkable box office returns in IMAX theatres and the feedback from moviegoers who experienced it in IMAX 3D was that the experience was nothing short of amazing," said Dan Fellman, President of Domestic Distribution at Warner Bros. Pictures. "We were especially impressed with the legs of the IMAX DMR version, as it was selling out shows and packing IMAX theatres weeks into the new year. We believe new audiences, as well as repeat customers, will want to make The Polar Express: An IMAX 3D Experience part of their holiday tradition."

"The outstanding success of The Polar Express: An IMAX 3D Experience convinced us that this film can be a holiday perennial, similar to It's a Wonderful Life, that will draw audiences year after year," said IMAX Co-Chairmen and Co-CEOs Richard L. Gelfond and Bradley J. Wechsler. "Commercial exhibitors took note of the movie's performance to date in IMAX theatres, leading to increased signings momentum, and many of our customers have expressed a desire to bring the film back for another run."

Greg Foster, Chairman and President of IMAX Filmed Entertainment, continued, "It is a pleasure to once again work with our partners at Warner Bros. Pictures on this groundbreaking Robert Zemeckis production, and we look forward to offering moviegoers another chance to be captivated by the classic Chris Van Allsburg tale presented in stunning IMAX 3D."

Castle Rock Entertainment presents, in association with Shangri-La Entertainment, a Playtone/ ImageMovers/Golden Mean Production of a Robert Zemeckis Film: Tom Hanks in The Polar Express. Directed by Robert Zemeckis from a screenplay by Zemeckis & William Broyles, Jr., the film is produced by Steve Starkey, Robert Zemeckis, Gary Goetzman and William Teitler and is based on the book by Chris Van Allsburg. Tom Hanks, Jack Rapke and Chris Van Allsburg are the executive producers.

The production team includes directors of photography Don Burgess, A.S.C. and Robert

Presley; production designers Rick Carter and Doug Chiang; and editors Jeremiah O'Driscoll & R. Orlando Duenas. Senior visual effects supervisors are Ken Ralston and Jerome Chen. Co-producer is Steven Boyd. Music score is by Alan Silvestri, and original songs by Glen Ballard and Alan Silvestri.

The Polar Express is being distributed worldwide by Warner Bros. Pictures, a Warner Bros. Entertainment Company. Soundtrack album on Warner Sunset/Reprise Records. This film is rated G by the MPAA.

eDimensional Denies Internet Rumors About Potential Partnership with Nintendo

3D-News Posted: Friday, May 6, 2005 (13:50 UTC) | **Posted By:** Webmaster

eDimensional, the leading manufacturer and worldwide distributor of cutting edge gaming and Virtual Reality accessories, today denied rumors circulating on the Internet that they were in negotiation with Nintendo Co., Ltd., of Kyoto, Japan, the acknowledged worldwide leader in the creation of interactive entertainment.

According to online buzz, the Florida-based company is in discussion with Nintendo to license or sell its patented stereoscopic 3D technology, which is currently featured on the eDimensional 3D Gaming Glasses and VirtualFX console product, for use by Nintendo in future console systems. Several internet websites and forums are speculating that Nintendo is preparing to enhance the gaming console experience with stereoscopic 3D graphics. Because of eDimensional's ability to convert a two dimensional image on a standard television screen, using the VirtualFX, into a 3D image, some may be correlating this with Nintendo's possible upgrade.

"While it is typically our policy not to comment on rumors or speculation, due to the overwhelming number of phone calls and emails inquiring about this we felt the need to acknowledge that eDimensional is in no formal discussion or negotiation with Nintendo regarding our stereoscopic 3D technology," said Michael Epstein, CEO of eDimensional.

"Dimensions in Politics" at the 3D Center of Art and Photography

3D-News Posted: Thursday, May 5, 2005 (7:29 UTC) | **Posted By:** Webmaster

Ernie Rairdin has the unique opportunity to chronicle political history as it passes his Iowa doorstep every election year, and he's been making stereoscopic images of candidates since 1987. "Dimensions in Politics" captures the atmosphere as well as the personalities in this collection of photojournalistic stereocards.

The stereo theatre will present Further 3D Sea Adventures, a chance to marvel at the beauty of ocean creatures without getting wet. Photographed by John Roll, this excursion into the depths of the sea will be shown hourly.

The 3D Center also houses a collection of antique and contemporary stereo cameras, viewers and other devices. Information panels and interactive displays explain the phenomenon of 3D vision. The Center's collection of stereocards are available for viewing and the reference library is open to visitors. There are daily 3D slide projections.

Open Fridays, Saturdays, Sundays from 1 pm until 5 pm. Open First Thursday from 4pm until 9 pm. Admission by donation. 1928 NW Lovejoy, Portland/Oregon, USA. Tel.: 1 (503) 227-6667, Web: http://www.3dcenter.us.

Curse of DarKastle: The Ride Debuted May 1 at Busch Gardens Williamsburg

3D-News Posted: Thursday, May 5, 2005 (6:53 UTC) | **Posted By:** Webmaster

Sometimes the only way to lift a curse is to meet it head on. Or, in the case of Busch Gardens Williamsburg's Curse of DarKastle: The Ride, straight down. Busch Gardens Williamsburg unveils Curse of DarKastle to the anticipation of thrill seekers. A cutting-edge addition to the park's stellar lineup of thrill rides, Curse of DarKastle sends guests aboard gravity-defying sleighs careening through the dark and mysterious corridors of a Bavarian castle. Passengers brave enough to ride are bombarded by heart-stopping chills as the sleigh hurtles through the darkness of an ice-bound world.

"Curse of DarKastle is going to absolutely astonish our guests," states Donnie Mills, executive vice president and general manager for Busch Gardens Williamsburg and Water Country USA. "This is an enormous attraction; it will absolutely have thrill seekers screaming," added Mills.

Expert crews were assembled to create a terrifyingly surreal experience. Technological advancements in ride engineering, special effects, theming, visual projection and audio systems create Curse of DarKastle's unique experience.

"The technology that exists in the theme park industry today makes Curse of DarKastle possible; we couldn't have achieved this three to five years ago," according to Larry Giles, vice president of design and engineering for Busch Gardens and Water Country USA. "Curse of DarKastle is exactly what our guests have been waiting for - a frightening coaster-like ride where you actually believe you might not make it out," added Giles.

Curse of DarKastle represents the Williamsburg park's next generation of adventures, and the European themed park's first major ride since the opening of Apollo's Chariot hyper coaster in

1999. Following a one-minute-forty-second pre-show that hints at a mysterious legend, guests will board eight-passenger golden sleighs for a mesmerizing three-minute-twenty-second journey through the castle's ghostly corridors. Elements of the dynamic ride include ˇa bone- chilling chase, 3D-imagery and immersive special effects.

State-of-the-art ride systems send passengers on their journey through a castle seemingly frozen in time. Traveling along Curse of DarKastle's 1,000 feet of track, the sleighs pass through 11 eerie chambers. Incorporating linear, circular and vertical motion, the intelligent ride vehicles allow for varying rates of acceleration as well as total experience manipulation.

In addition to the pulse-pounding ride, the digitally projected scenes immerse guests in the ride's story. Loosely themed after the legendary King Ludwig of Bavaria, Busch Gardens' ride designers produced the tantalizing tale to create a ghostly sleigh ride excursion. Nine of the haunting vignettes provide guests with 3D-imagery.

"The combination of computer-generated graphic imagery and digital projection systems enable every passenger to feel like they have the best seat on the ride," stated Giles.

In order for guests to feel completely surrounded by the Curse of DarKastle experience, special effects and theming needed to play a significant role in the ride's development. The larger-than-life fireplace, intimidating stalactite grotto, and castle façade are some examples of Curse of DarKastle's intricacies. Extremes in temperature, shrouding fog, and shattering ice enhance the spine-chilling environment. Curse of DarKastle smashes the limits of dark ride technology to generate a multisensory experience unlike anything else.

3D Digital Cinema Gains Momentum with First-Ever Showing at Large Format Conference in LA

3D-News Posted: Wednesday, May 4, 2005 (5:23 UTC) | **Posted By:** Webmaster

The Christie CP2000 2K resolution DLP Cinema projector was used in a demonstration of the latest generation of 3D entertainment technology using the ground-breaking single lens system. The event, Los Angeles' first-ever 3D presentation, took place at this year's Large Format Cinema Association Conference (LFCA) and Film Festival. It featured award winning 3D HD Digital Cinema content, including "Bugs!", created by Principal Large Format, which won a "Best Film of Festival" award from the LFCA.

The sponsor of the event was Crest National, an industry leader in all forms of digital media, including Large Format film, HD video and DVD/CD/SACD manufacturing. It selected the Christie CP2000 projector because it offers the highest resolution DLP Cinema technology commercially available today and is the industry's brightest Digital Cinema projector, an important requirement for optimum viewing of large format 3D content.

"The new, single lens 3D technology has proven to be a cost-effective way to screen Large Format 3D as well as 2D content. It represents a significant advance over the present film-based systems," noted Crest National president, Ron Stein. "When you consider that the current system typically requires a full-time projectionist who must handle 14 cans of film each weighing 60 pounds for a single screening, converting to HD digital prints, which can be shown over a server with minimal handling, is the obvious choice."

The 3D technology, which uses a cutting-edge active 3D-Glasses system, was unveiled by Texas Instruments (TI) at ShoWest 2005 recently. TI's landmark presentation also used a Christie CP2000 projector and included the participation of George Lucas and Academy Award®-winning director James Cameron, who screened clips from their upcoming movies.

India to launch satellites with Stereoscopic Imaging capability

3D-News Posted: Wednesday, May 4, 2005 (5:09 UTC) | **Posted By:** Webmaster

India will launch two satellites on polar launch vehicle later this week, an official spokesman said.

The Polar Satellite Launch Vehicle, PSLV-C6, slated to be moved to a newly-developed second launch pad at southern Sriharikota, near Madras city, on Thursday (May 5), will carry Cartosat, a remote sensing satellite for cartography, and Hamsat, a micro-satellite providing Amateur Radio Services.

This is the first time an Indian rocket will lauch two satellites at the same time for domestic applications.

The two satellites have been built by Indian Space Research Organisation (ISRO) at a cost of four billion rupees.

Cartosat-1 carries the most advanced high resolution cameras with track stereo imaging capability.

"The satellite is basically meant for mapping. It will give you an imagery of a very high resolution of about 2.5 metres and also it has two cameras. Simultaneously, it takes the pictures from both the cameras and you are able to take stereoscopic pictures. So you can create digital elevation models i.e., you get height information also. So with this very high resolution you can use this imageries for various development applications. It is one of the most sophisticated satellites ever built by us," B. Krishnamurthy, spokesman of ISRO's Sriharikota launch centre (SHAR).

Australian Technology Vrooms Up SAE World Congress

3D-News Posted: Wednesday, May 4, 2005 (5:00 UTC) | **Posted By:** Webmaster

Those who attended the SAE (Society of Automotive Engineers) World Congress in Detroit this month and visited the Australian Pavilion definitely had something to be excited about. In a stunning presentation, set in a new 3D theater in the round, visitors equipped with 3D glasses, witnessed the virtual development and unveiling of the new Vroom concept car - a three dimensional vehicle depicting why Australian automotive suppliers are identified around the world for being innovative, solution-oriented and robust.

The Vroom exhibit and 3D theatre was a stunning experience, drawing over 3,000 visitors in the first two days of the show. The Vroom set new standards in virtual product visualization by offering a spectacular level of Virtual Reality, using 360 degree stereoscopic projection to create the illusion that solid objects and moving images are within reach. Following its international debut at SAE, the Vroom will make an appearance at the Aichi World Expo in Japan. After a world tour, it will return to Australia, to serve as the automotive industry's showcase at the 2006 Commonwealth Games in Melbourne.

South African safari hits the New York stage

3D-News Posted: Friday, April 29, 2005 (19:01 UTC) | **Posted By:** Webmaster

From today, some American cinema-goers will be able to get an unprecedented view of the South African safari experience, without leaving the United States. It's thanks to a ground-breaking 3-dimensional film, which is being released later to specialised IMAX screens in the US. The hope is that the remarkable visual experience will boost the South African tourist sector.

They queued around a New York city block for the world premiere of what's billed as the first ever 3D wildlife film. Audience members were promised a "new cinematic experience". The concept; to put viewers in the passenger seat of a safari adventure through five of South Africa's national parks. The result; "The Big Five", as they've never been seen before on the big screen. Television doesn't do it justice. To get the 3D effect, you need to watch the film at an IMAX cinema and wear special glasses. Without them, the image is distorted.

The initial idea for "Wild Safari 3D" came from South African Tourism, which helped fund the project. For Dr Felicia Mabuza-Suttle, who's left TV to promote South Africa in the United States, it was money well-spent. "It was a way of trying to show real wonder in a very spectacular way, really; bringing the animals to America and for America to go to South Africa, to go and see them live," said Mabuza-Suttle, now the US Country Manager for South African Tourism. Which is why many of the invited guests at the film premier and the after-show party were American travel professionals.

By watching the wildlife through the 3D glasses, the American audience got about up close and personal with the animals without actually boarding an aircraft, flying to South Africa and going on safari. The hope is that this 3D experience will make them want to do exactly that and encourage others to do the same.

Barco Stereoscopic visualization techniques and immersive data analysis to support cancer research at Erasmus MC, the Netherlands

3D-News Posted: Friday, April 29, 2005 (7:29 UTC) | **Posted By:** Webmaster

Barco announced that it has been chosen to deliver the visualization for the Virtual Reality program for molecular imaging and exploratory genome research in Erasmus MC Rotterdam, the largest academic medical center in the Netherlands. The "Barco I-Space" virtual environment has been officially opened on March 24, 2005 by the mayor of Rotterdam. The I-space enables scientists to "walk through" massive volumes of genomic, chemical, and medical information and extract more information in a shorter timeframe than by using conventional approaches. Moreover, it enables clinicians and researchers to explore and visualize in 3D Ultrasound, CT and MRI images.

Molecular Medicine is a fast moving field and a new buzz word. The recent acquisition of Amersham by General Electric Healthcare illustrates its importance. Visualization of tracers and molecular markers in medical images (scans) becomes more and more important for clinical diagnostics surgical intervention and drug development.

The unraveling of the genetic information encoded in the DNA of human cells has generated a rapid progress in understanding the roles of our genes in health and disease. Over the years

Erasmus MC has made important contributions to this field.

Nowadays further progress requires the introduction of advanced infrastructure for data visualization and integration to analyze the enormous quantities of data involved. With its new Center for Bioinformatics equipped with a virtual reality environment Erasmus MC has taken up this challenge.

Located in the heart of the biomedical research activities of Erasmus MC, the high-tech bioinformatics department is equipped with state of the art hard- and software. In collaboration with other departments the center's multidisciplinary team supports projects that generate genomics and proteomics data from basic research, forensics studies, molecular diagnostics and clinical trials. Erasmus MC is the first university medical center to install a virtual reality environment developed and implemented by Barco for the support of clinical and research applications.

The I-space enables researchers to explore vast amounts of genomics and proteomics data in an infinite three-dimensional world. It also presents clinicians with new ways to investigate datasets from all kinds of 3D imaging modalities, ranging from 3D/4D ultrasound for prenatal diagnosis to functional MRI for molecular imaging. The I-space makes it possible to discover relations and structures that would go unnoticed when using conventional software on regular 2D computer screens.

I-space
In the Barco I-Space research analysts stand inside a cube that has 4 sides forming a seamless three–dimensional virtual surrounding. 3D views in the Barco I-Space can show hierarchical relationships within gene families, and many to many relationship networks of gene expression data or protein-protein interactions. By integrating data from various databases such as chromosomal localization of genes, links/associations with diseases, micro array expression data, one can identify correlations that remain hidden with the conventional approaches. Assigning different colors to the nucleotides in DNA clarifies the image. By applying image-processing techniques, distinct features begin to emerge and areas for further study can be identified at a glance. Next to stereo vision (different images for left and right eye to enable depth cues), the Barco I-Space includes motion tracking, where hand and head movements are measured and fed back to the computer, thus allowing researchers to interact with the image.

Advantage: Multi disciplinary Discussion of complex datasets
Barco's I-Space state-of-the-art visualization tool will allow an interdisciplinary team of scientists with diverse backgrounds including Medicine, Molecular Biology, Chemistry, Statistics, and Computer Science to explore the human genome with cutting edge IT technology and thereby improving the understanding of genomes in general and identification of gene functions, disease markers and pathways in particular.

Barco, SGI, Erasmus MC Collaboration and Development
"The expertise of Barco, including project consulting, analysis and design of the visualization installation with projectors, proprietary developed screens and precision mechanical construction for a seamless high resolution image with excellent stereo separation, was essential for the successful realization of this unique project" states prof.dr.Peter J. van der Spek, professor at the dept. of bioinformatics, "The Barco professionals were essential to draft a project plan to make sure we selected the most appropriate projectors and technology for visualization of research and clinical data."

The VR-installation for Erasmus MC offers high resolution, high contrast and brightness, good

color uniformity, a well-balanced color depth and excellent stereo separation essential for clinical decision making.

"In the same way as Barco is the leading company in high resolution visualization SGI has the track record in the field of graphics computation. We realized we could create a win-win-win situation for all parties by the joint development and integration of each others expertise", says prof. dr. Peter J. van der Spek.

Medical Visualization

The center also runs a research program of its own, which provides the biomedical and technological basis of all the other activities ranging from basic research, forensic studies, molecular diagnostics and clinical trials.

It concentrates on the way the genome as a whole contributes to the evolution, development, structure and function of the brain.

Among others it involves analysis of gene expression in cells of the brain and combines genomics, proteomics and cytogenetics data to identify genes associated with neurological disorders. A particular focus lies on studying the molecular mechanisms underlying neuronal migration disorders that lead to epilepsy. For this purpose in dept studies of MRI scans are needed to detect neurons that have not migrated to the proper place in the brain during development. This multi disciplinary effort is a collaboration between radiologist Maarten Lequin, Clinical Geneticist Grazia Mancini and the bioinformatics department.

Moreover, Erasmus MC currently applies VR technology in the field of 3D/4D Ultrasound for prenatal diagnosis, 3D/4D Ultrasound for diagnosis of heart defects, and last but not least CT/ MRI scans for tumor inspection.

Holoco Inc., a Holographic Technology Development Company, Announces Purchase of Pulse Laser System

3D-News Posted: Friday, April 29, 2005 (7:00 UTC) | **Posted By:** Webmaster

Holoco Inc. announced that it had executed an agreement to purchase a high powered G2J Nd:YLF oscillator and a Phosphate Glass amplifier laser system from Geola Technologies Ltd.

In addition to constituting a highly versatile laboratory tool the G2J laser has been rigorously designed to meet the high standards required for display and technical Holography applications.

The laser is manufactured by Geola UAB, Lithuanian Subsidiary of Geola Technologies Ltd., Naugarduko g. 41, Vilnius LT-2006, Lithuania.

Based on state-of-the-art pulsed laser technology the G2J can be used to produce holograms of people, animals or 3D objects extremely rapidly and with astonishing ease.

The system will enable the company to manufacture products including 3D Posters and POP Displays for advertising, promotion and product enhancement applications in addition to offering services such as 3D Portraiture of VIPs, Celebrities, family members and pets.

Holoco also intends to utilize the system for virtual prototyping and 3D copying for the reproduction of museum exhibits and archival artifact recordings. The Company anticipates delivery and installation of the system at their center city Philadelphia Facility within the next 8-10 weeks and intends to have it fully operational in advance of the July 4th holiday festivities.

For more information, see http://www.holoco.com.

Rumors: Stereoscopic Nintendo GameCube addon

3D-News Posted: Monday, April 25, 2005 (7:28 UTC) | **Posted By:** Webmaster

There are rumors that Nintendo's next version of the GameCube, Revolution, will not only come with wireless controllers and a gyroscopic feature - but also with Stereoscopic 3D.

Wild Safari 3D on Television, April 25th

3D-News Posted: Friday, April 22, 2005 (17:30 UTC) | **Posted By:** Webmaster

In the USA, "Wild Safari 3D: A South African Adventure" will be the subject of a live segment on the national Today Show on Monday morning, April 25, 2005. The film's star, zoologist and field guide Liesl Eichenberger, will appear with a live baby African lion cub and African leopard cub on the segment, which will talk about the film and will be accompanied by footage of Wild Safari 3D.

The segment will air some time between 8:30am-9:00am EST and will broadcast just after the first hour-and-a-half block is completed. Check local listings for whether the show airs live or is tape-delayed in your market.

A national TV segment with Liesl and cubs has also been secured with the entertainment magazine TV show Inside Edition.

Imax Plans Big Role in 3-D Film Resurgence

3D-News Posted: Friday, April 22, 2005 (9:53 UTC) | **Posted By:** Webmaster

Hollywood Appears to Be on the Cusp of a 3D Renaissance, and Imax Plans Big Role

Hollywood appears to be on the cusp of a 3D renaissance, and Imax Corp. intends to play a big part.
Imax, known for its eight-story-high film screens, has released traditional documentaries filmed in Imax 3D for years. In the last couple of years, the Canadian company has captured the attention of Hollywood studios with Imax DMR, a digital remastering technology that transforms standard 35mm films into the giant Imax format.

The process has allowed it to exhibit commercial films the likes of "Star Wars: Episode II - Attack of the Clones," "The Matrix Reloaded," and "Spider-Man 2" in its theater network.

In November, it went a step further, releasing the computer-animated film "The Polar Express" with Warner Bros. Pictures in Imax 3D, which turned out to be its biggest Hollywood release to date, grossing nearly $50 million in Imax theaters.

After about a decade of research and development, Imax says that it's ready to release a live-action feature film in Imax 3D, and is in discussions with studios for such a project.

Richard Gelfond, co-chief executive of Imax, said the company hopes to announce a live-action Hollywood film in Imax 3D sometime this year for release in 2006. He disclosed that Warner Bros.' "Superman Returns" and "The Poseidon Adventure" are two projects under discussion.

To do that, Imax has come up with a method to convert footage shot in two dimensions to three.

Gelfond said Imax demonstrated scenes of its live-action 3D technology in the late 1990s, and its 2002 Imax 3D documentary "Space Station" actually included a scene that was originally shot in two dimensions.

While the cost of 3D conversion for computer animation is about $10 million, live-action is

somewhat cheaper at $6 million to $8 million, he said.

Imax isn't the only player vying for a piece of the live-action 3D pie. Another is California-based In-Three Inc., whose technology can upgrade almost any digital cinema to show an extra dimension. The process received an endorsement from filmmaker George Lucas, who demonstrated 3D clips from two of his "Star Wars" films at ShoWest recently.

Imax filed a patent-infringement claim against In-Three in March. On Friday, In-Three filed a countersuit denying any wrongdoing and asking the court to declare the suit invalid.

Neil Feldman, vice president of In-Three, said the company has patent-violation concerns of its own. He said Imax had approached In-Three, which did some 3D conversion tests for Imax. He assumed a business relationship would result, but obviously Imax decided to go its "own direction," he said.

Feldman said Imax will always have a special place for film fans, but In-Three is aiming to get its 3D content on all 35,000 screens out there - not just a couple of hundred.

Gelfond argued that 35mm film is inferior to Imax. "Part of what makes the Imax experience so special is that it goes to the peripheral vision and it enables viewers to be immersed into the 3D action," he said.

He noted that James Cameron released "Ghosts of the Abyss" in 3D in 50 Imax and 50 conventional theaters, and the box office was four times as high in Imax.

Dan Fellman, president of domestic distribution at Warner Bros. Pictures - one of Imax's biggest supporters in Hollywood - said he's open to exploring the possibilities that all these new 3D technologies offer. But it remains to be seen how it all unfolds.

"I think it's just great that there's all this innovation out there and that people are working hard with technology to try to enhance the experience of moviegoing," he said in a recent interview. In the meantime, he looks forward to future projects with Imax.

He said the results for "The Polar Express" astonished the studio.

"Right now, (Imax has) a wonderful brand, people like it, we're going to continue to support it. And we look forward to some healthy grosses at the box office down the road," he said.

SeeReal hooks up to 3D CAD Workstation at Hanover Fair 2005

3D-News Posted: Tuesday, April 19, 2005 (10:50 UTC) | **Posted By:** Webmaster

From 11 - 15 April CAD users enjoyed the first chance to experience a complete 3D workstation with the SolidWorks® CAD program on a SeeReal monitor.

The 3D Workstation shown at the PNY stand featured SolidWorks' CAD program on SeeReal's auto stereoscopic monitor, the SpacePilot 3D mouse from 3DConnexion and an Nvidia Quadro stereo compatible graphics card.

This unique collaboration created fantastic effects and demonstrated outstanding functionality. Up to four windows can be shown simultaneously, allowing the user to switch each window from 2D to 3D. And thanks to the SpacePilot 3D mouse, navigating in space, twisting and turning objects, is a very simple and intuitive affair.

This marks a major breakthrough, confirms Markus Gras from UNITEC, "One of the problems working with CAD programs are the optical illusions that can occur when you cannot judge the depth. But with the stereo monitor you solve this problem, saving time and avoiding costly mistakes."

The combination of the CAD application and Nvidia's driver makes access to the third dimension effortless. Current stereo drivers for SolidWorks® are available for registered users at http://www.solidworks.com.

SeeReal Technologies GmbH was founded in 2002 in Dresden. The technology company develops and sells "autostereoscopic displays": Computer monitors that allow three-dimensional visualization of videos and images without requiring any additional glasses. SeeReal has sales and technology partners in Europe, Asia and North America. The company has won numerous awards including the "European Information Society Technologies Prize (IST)" and the "Innovation Prize of the Free State of Saxony". Worldwide customers include Roche Diagnostics, NASA, Rutherford Appleton Laboratory, and the German Aerospace Center.

For more information: http://www.seereal.com

8 cameras for the French Alioscopy autostereoscopic system

3D-News Posted: Monday, April 18, 2005 (20:18 UTC) | **Posted By:** Webmaster

The "Espace des Sciences" of Rennes, France, is now showing an autostereoscopic 3D movie shot with 8 cameras, until July 30, 2005. The movie is part of an exhibition about gorillas. Displayed on a 40 inch glasses-free LCD Alioscopy screen, the gorillas appear to be right in front of the visitors, just as if the spectators were looking through a window in the animal park where the movie was shot.

Named after its inventor Pierre Allio, the french Alioscopy patented technology uses home made Lenticulars on glass and original image treatement to provide viewers with high quality 3D images.

Two Alioscopy video systems are available for live-action as well as CG images :

The 8 views system is designed for large audiences, allowing viewers to move freely and stand wherever they want to watch the content. It does not use any tracking device.

The 2 views system is designed for individual use or small groups, with or without tracking. It allows real time imaging for interaction with 3D objects.

For more information, see http://www.alioscopy.com

Toshiba Achieves Breakthrough in Flatbed 3-D Display

3D-News Posted: Saturday, April 16, 2005 (2:59 UTC) | **Posted By:** Webmaster

Toshiba Corporation announced a new display technology that allows 3-D images to be viewed on a flatbed display without any need for special glasses. Viewing the display from an angle allows the viewer to experience 3-D images that stand out several centimeters from the surface of the display. The new technology opens up new areas of application for 3-D displays, including arcade games, e-learning, simulations of buildings and landscapes, and even 3-D menus in restaurants.

Toshiba will continue to refine the technology, including integration of touch-screen control, and plans to commercialize products based on it within two years.

3-D displays that do not require aids such as glasses work by projecting slightly different images to each eye, a form of visual stereo. The displays consist of micro-lenses that control the direction of light emission, and supporting software that creates images. However, mainstream 3-D technology is limited in terms of the viewing angle at which it can display 3-D images, and the images are also tiring to view.

Toshiba's new displays employ an integral imaging system that reproduces light beams similar of those produced by a real object, not its visual representation. This overcomes the main problem with a flatbed display: distance. The difference in the distance from the eye to the center of a display, and from the eye to the display's edges and corners, is greater for a flatbed display than for a standard upright display. In seeking reproduction of natural 3-D images on the flatbed display, Toshiba developed proprietary software that utilizes 10 or more views of an object (the current prototype takes 12 or 16), either live-action images or CG images, and which

processes and reproduces the images in 3-D, with a wide viewing angle. Toshiba also developed middleware and dedicated circuitry that supports fast playback of the images with only a graphics card.

On commercialization, Toshiba will deliver both the hardware and the software as a total solution.

The combination of advanced technologies achieves a full 3-D effect when viewed at an angle as wide as 30' from the center of the screen, and from distances of over 30 cm. The naturalness of the image signal allows long viewing.

Toshiba has applied the new technology to 24- and 15.4- inch displays with 480 x 300 pixels, a resolution 1.5 times that found in the company's conventional 3-D displays, allowing viewers to see high quality stereoscopic images.

The new display will be exhibited at the "The 1st Display 2005 International FPD Expo," which will be held from April 20 to April 22, 2005 at Tokyo Big Sight in Tokyo, Japan. Display 2005 is an international trade show for all kinds of flat panel displays, including LCDs, PDPs, OLEDs and FEDs.

Barco's new relocatable "DEUCE" offers high-end stereoscopic visualization without the high investment

3D-News Posted: Friday, April 8, 2005 (21:00 UTC) | **Posted By:** Webmaster

The Barco DEUCE combines a large screen and wide viewing angle with an exceptionally small footprint. It offers high-end stereoscopic visualization functionality without requiring any room modifications. The system is easy relocatable and can also be deployed in smaller rooms.

The Barco DEUCE is driven by two Barco Galaxy three-chip DLPTM active stereo projectors for bright images even in high ambient light conditions. It gives a unique, large high-contrast image (3.2 by 1.4m) with an exceptionally small rear-projection depth of less than 1.2m.

Barco's DEUCE can be equipped with a tracking device and mouse emulation technology. These options allow for simulator-style navigation in the virtual environment, permitting users to simply walk around grabbing and pointing at objects in a natural, intuitive way. They offer full interaction with the data without need for a keyboard or mouse.

A multi-input, multi-display ViewScape™ option allows you to simultaneously access multiple computer platforms on the same immersive screen. Users can remain in real-time 3D stereo with an application while adding information windows in non-stereo mode, e.g. for video conferencing to collaborate with remote sites. In addition, work stations, laptops, and video sources can be simultaneously combined and visualized on the overall viewing space.

Thanks to the Barco Deuce, more asset teams will be able to use the powerful tool of stereoscopic viewing for accurate analysis of large amounts of complex data, without the high investment needed for a high-end visualization room.

Even Babies Can Have Optical Illusions

3D-News Posted: Thursday, April 7, 2005 (6:43 UTC) | **Posted By:** Webmaster

At the tender age of five months babies can be fooled by complex information about distances in drawings involving perspective, psychologists from the University of Bonn (Germany) have shown. They fixed two rubber figures onto a picture on which a chessboard pattern appeared to be receding away from the babies. The babies then tried to grab the toy which seemed nearer to them because of the information on distance implied by the drawing. This effect was even noticed in some cases in five-month-old children. Previously most experts had assumed that babies cannot decipher data on distance which are based on perspective until much later. Five-month-old Samuel doesn't seem at all worried about the large plaster covering his right eye. He gurgles contentedly and tugs inquisitively at the white curtain in front of his nose, until he is lifted up by an invisible force. Now Samuel is looking at a chessboard which is drawn in such a way that it seems to be receding into the distance away from him. From this background two bright orange hippos are staring at him; Samuel looks back at them with interest. He tries to grab hold of the hippo which is located a little lower down than the left-hand hippo; it squeaks and the curtain falls. When it goes up a few seconds later, two pelicans have taken over from the hippos. This time the left-hand pelican is lower down. Samuel reaches out for the bright red beak, there is a squeak and the curtain falls. After two dozen repetitions a voice in the background says, "Thank you, that'll be all," thereby ending Samuel's guest appearance at the University of Bonn's Institute of Psychology.

"What we are investigating here is at what point babies can begin to decipher visual data about perspective," says Laura Hemker, who is doing her PhD at the Institute. The problem is that even the brightest baby cannot yet say, at the age of five months, what it can see. For this reason the researchers on Dr. Michael Kavsek's team had to think up a trick enabling them to detect the perceptive faculties of their little guinea pigs. "If you offer a baby two toys, it usually goes for the nearest one," Laura Hemker explains. "We make use of this fact for our experiment." The PhD student put 20 seven-month-old babies and 20 five-month-old babies in front of the chessboard background. Due to the perspective figures which are fixed higher up and near the horizon appear further away than rubber toys which are a little lower down - although this is only the case if the observer covers over one eye. Otherwise the stereoscopic data provided by a pair of eyes cancel out the effect of perspective faked by the chessboard. "This is precisely what we observe with our babies," adds Julia Niehl, one of the students assisting in the project. "If they can use both eyes they choose one of the two toys at random. However, when we cover over one eye, they more often go for the toy located lower down which appears closer because of the data on perspective contained in the background image."

At any rate, 19 of the 20 seven-month-old babies went for the lower one rather than the higher one significantly more frequently when they could only use one eye. In eight out of ten cases they first tried to touch the toy that seemed nearer. However, if they were allowed to use both eyes, the location of the toys had no effect on the toys
selected.

Even in the case of the five-month-old babies it was 16 out of 20 who reacted to data on

perspective - which came as a surprise to the psychologists, as previously most experts had assumed that babies did not acquire this ability until about the age of seven months - "and that this took place, so to speak, from one day to the next, almost as if someone had flicked a switch," says Dr. Kavsek, who heads this study on perception. "Our findings, however, seem to point to a continuous process of development: babies become aware of depth-of-field data at a very early age; the older they are, the less obvious the signals need to be and the better it works."

Probably the perception of perspective kicks in even earlier. However, to test this hypothesis the psychologists would have to change the way their experiment is set up: most babies cannot reach out for something specific until they are four or five months old.

Fakespace Systems Inc. Introduces Affordable Active Stereoscopic Visualization System

3D-News Posted: Thursday, April 7, 2005 (6:38 UTC) | **Posted By:** Webmaster

The WorkZ(TM) Bundled Solution Lowers Cost for High-Resolution 3D Viewing of Real-Time Simulation Applications

Fakespace Systems Inc. announced the launch of the WorkZ(TM) Visualization System, a complete cost-effective, real-time computing and active stereoscopic projection system bundle. With a system cost below $50,000, the Fakespace bundle provides all of the computing and hardware components for a large screen immersive display system, with image quality comparable to a 3-chip DLP(TM) projector and a list price equivalent to the cost of the DLP projector alone.

The WorkZ system makes the benefits of high quality 3D visualization accessible to a broader range of designers, researchers and engineers who have been unable to realize the benefits of large-scale visualization because of the price of other active projection technologies. The bundle includes everything required to generate and display high quality, real-time stereo images. The system comprises:

- A Fakespace Beacon(TM) SX projector with 1400 x 1050 resolution and 1,500 lumens per eye brightness
- A 3.0 GHz high performance Pentium® 4 workstation with 1 GB RAM and dual DVi output high-resolution graphics card. (Direct digital connection to a Beacon projector optimizes image quality and stability)
- A wall-mounted or free-standing rear projection screen with high gain to preserve brightness even in ambient room light
- Two active stereoscopic glasses and synchronization signal emitters
- All necessary cables for system installation

Fakespace's Beacon projection technology is a cost effective alternative to 3-chip DLP active stereo technology and a more adaptable technology than polarized (passive) projection systems. While polarized projection systems have traditionally been an affordable alternative to active stereo technology, Beacon's innovation rests in its ability to project images with virtually no image ghosting (right eye/left eye cross-talk), superior contrast levels, reduced system footprints, and more screen options at a price comparable to passive technologies.

"In our discussions with end users, we have repeatedly heard that they desire high quality stereoscopic images but cannot justify the price of 3-chip DLP technology for single screen projection," said Dr. Chris Clover, president and chief executive officer of Fakespace Systems Inc. "The WorkZ system fills this void with exceptional images and a complete, integrated solution."

Fakespace also offers a range of options for the WorkZ system, including motion tracking systems, audio, enclosures and application development software.

NASA Tech Briefs Awards Sharp Actius RD3D With "Product of the Year"; Sharp's 3D-Enhanced Notebook Takes Top Honors as "Gold Winner" and "2004 Product of the Year"

3D-News Posted: Thursday, April 7, 2005 (6:34 UTC) | **Posted By:** Webmaster

Sharp Systems of America announced that the Sharp Actius RD3D was chosen by readers of NASA Tech Briefs as the Gold Winner of the publication's 10th Annual Readers' Choice Product of the Year Awards. The award is voted upon by the readers of NASA Tech Briefs from 12 nominated Products of the Month throughout the year. Ian Matthew, 3D Business Development Manager at Sharp Systems of America, was presented with the award during a special reception at the top of the John Hancock Center in Chicago, IL. NASA Tech Briefs is the largest-circulation design-engineering magazine, with more than 190,000 readers.

"Sharp is honored that the readers of NASA Tech Briefs have chosen the Actius RD3D as the product of the year for 2004," exclaimed Matthew after the event. "Sharp's 3D LCD Technology has gained acceptance by professionals who need the advanced stereoscopic displays for their research and development applications." Matthew added, "It's only a matter of time before technological evolution takes its course and you start seeing 2D/3D switchable displays readily in the main stream."

Sharp recently introduced the successor to the Actius RD3D. On March 8, 2005, Sharp released their second-generation 3D notebook, the Actius AL3D. Building on the foundation laid by its groundbreaking predecessor, the Actius AL3D represents a significant step up in power and style for Sharp's 3D notebook line. Powered by Intel's brand new Pentium(R) M Processor 750, the New NVIDIA(R) GeForce(TM) Go 6600 graphics processor with 128 MB Video RAM, and stocked with 1024 MB of DDR2 SDRAM the powerful Actius AL3D is geared for high-end mobile performance.

"The Actius AL3D offers high-end power and functionality, providing users with some of the most advanced computing technology available in a very attractive package," said Ian Matthew, 3D Business Development Manager at Sharp Systems of America. "Viewed on the impressively bright LCD screen that the Actius AL3D possesses, Sharp's 3D LCD Technology provides users with a superb three-dimensional visual experience that is crisp, clear, and precise."

Sharp's 3D LCD Technology

Developed jointly by Sharp Corporation and Sharp Laboratories Europe, Ltd. (SLE), Sharp's TFT 3D LCD Technology provides a significantly enhanced visual experience by offering a realistic sense of depth and presence. Unique to Sharp's 3D technology, the display can be

easily switched between 2D and 3D display modes at the touch of a button, providing a flexible working environment that takes full advantage of both 2D and 3D applications.

The 3D effect is achieved using a parallax barrier technique to separate light signals. Light from the LCD is divided so that different patterns reach the viewer's left and right eyes. The direction in which light leaves the display is controlled so that the left and right eyes see different images. When centered in front of the display, each eye receives the correct visual information for the brain to process. This makes it possible for the image on the screen to appear in three dimensions without the user having to wear special goggles.

"Sharp's TFT 3D LCD technology works on the principle of displaying left and right eye views that are separated so that the left eye sees only the left eye image, and the right eye sees only the right eye image," explained Ian Matthew, 3D Solutions Business Development Manager at Sharp Systems of America. "Since these images have perspective and are offset in the same way that the human eye normally sees the two images, the brain naturally interprets the image disparity and creates a 'sense of depth' effect. The result is a 3D, 'out-of-screen' display, that provides users with a visual experience previously unattainable without polarized or liquid crystal shuttering lenses."

European Large Size 3D-Display is showcased at the EXPO 2005 in the Japanese Pavilion

3D-News Posted: Tuesday, April 5, 2005 (14:04 UTC) | **Posted By:** Webmaster

X3D Technologies GmbH Jena has developed the potentially largest glasses-free 3D-Display of the world, a 180 inch 3D Projection Wall, for the Japanese Museum of Emerging Science and Innovation in Tokyo. The display is now being showcased at the 2005 World EXPO in Aichi/ Japan in the Japanese pavilion and will be moved to the Museum after the World Exhibition.

X3D has been selected by the Japanese authorities among other large industrial bidders and we are very proud of this choice. This is a strong break-through for German/European 3D Technology in Japan and Asia. The project order has been acquired in close co-operation with X3D's Japanese partner Netplus Ltd., headed by Prof. Yasushi Niitsu. Netplus is strongly engaged in scientific and other applications of 3D-displays.

The German President, Prof. Dr. Horst Köhler, was visiting the 3D display today and saw the Jena development results that are showcased in Japan. He met with X3D GmbH's Managing director, Paul-Louis Meunier, and expressed his congratulations on this outstanding result.

The Large 3D Projection Wall is 4 meters wide and 2,25 meters high and gives three-dimensional "out of the screen images" for multiple observers without the need of glasses. For the reason of this large size, X3D is hoping to get a prove as a world record.

Until the end of AICHI EXPO 2005, around up to 4 million people are expected to visit the Japanese pavilion and thus to see the Large X3D-Display. So far, more than 150,000 people have been exposed to it and were very impressed by the amazing 3D experience.

By this extraordinary audience, X3D is hoping to get further publicity in Japan in order to attract more orders for its outstanding 3D technology, and bring Germany and Europe a strong acknowledgement for the top class technology of the "Optical Valley" of Europe.

Lightspeed Design Announces New Stereoscopic 3D Projector; InFocus(R) DepthQ(TM) Stereoscopic Projector Is the World's First Affordable, Portable 3D Video Solution

3D-News Posted: Thursday, March 31, 2005 (16:55 UTC) | **Posted By:** Webmaster

Lightspeed Design Group, a worldwide leader in stereo 3D technology and services, today announced a new projector that delivers amazing stereo 3D at an equally amazing price. Lightspeed Design Group and InFocus Corporation have created a new class in 3D video projection, the InFocus® DepthQ(TM) Stereoscopic Projector.

The new InFocus DepthQ is truly the first of its kind. This affordable, portable 3D projector delivers rock-solid 120hz, DLP(TM)-quality stereo 3D for a fraction of the cost of other single-lens 3D projectors.

Whether in the office, laboratory, boardroom, or game room, the new DepthQ projector puts 3D visualization into the hands of the many, instead of a privileged few. All brought to you by InFocus, a name recognized and trusted worldwide for innovation and affordable quality in video technology.

- Affordable - Only $3,495, a fraction of the cost of other single-lens 3D projectors.
- Portable - At 6.8 pounds it fits under your arm and takes 10 minutes to set up.
- Quality - Flicker-free, 120hz 3D with DLP(TM) technology from Texas Instruments.

Product Design and Engineering: Stereoscopic 3D is the most effective way of communicating visual ideas. Companies worldwide recognize this fact and have spent millions equipping their design engineers with stereoscopic visualization. The new InFocus DepthQ projector finally makes stereo 3D an affordable tool for the line engineer and product designer, allowing real-time projection of stereo 3D CAD designs for collaborative product review. SolidWorks, a global leader in 3D CAD modeling software, now supports a stereoscopic 3D function, as do many other design platforms.

Sales and Marketing: DepthQ gives sales and marketing a unique 3D presentation option with lots of "WOW" built in. New product designs can be taken right from the engineers and incorporated into 3D presentations. DepthQ also supports standard 2D applications for video and PowerPoint.

Videogames and Movies: Imagine playing your PC games or watching movies in projected stereo 3D. With a growing list of games and movies available, the new InFocus DepthQ projector gives you a variety of options for video entertainment at home. The InFocus DepthQ projector also functions in standard 2D mode.

"We are pleased to provide Lightspeed with a 3D projector that enhances the DepthQ solution," said Scott Ballantyne, Chief Marketing Officer, InFocus Corporation. "Now more businesses and consumers will be able to take advantage of 3D projection with the InFocus DepthQ projector."

The InFocus DepthQ projector is now available for purchase exclusively through Lightspeed Design. For more information, visit http://www.DepthQ.com

Fakespace Delivers New Visualization System Technology to University of California, Davis Campus

3D-News Posted: Thursday, March 31, 2005 (9:38 UTC) | **Posted By:** Webmaster

Tiled PowerWall(TM) for Collaborative Data Visualization Is First to Use New XGA Native Resolution Active Stereoscopic Projection

Fakespace Systems Inc. announced that they have completed the installation of the world's first available 1024 x 768 native resolution active stereoscopic projection technology at the University of California's Davis Campus (UC Davis). The visualization system is located in the Virtual Reality Lab of the Computer Science Department and the Institute for Data Analysis and Visualization (IDAV). It is being used for a wide range of applications, including interactive data visualization and collaborative networked environments.

Six Fakespace Beacon(TM) XG projectors, arranged in a three projector wide by two projector high array, have been used to create a cost-effective, high-resolution tiled PowerWall visualization system. The projectors have been optically edge matched to maintain full resolution while minimizing the borders to smooth the visual transition between projected images. The full screen resolution of 3072 x 1536 displays fine details. This resolution was deemed essential for UC Davis' work on visualizing massive scientific data. The high resolution PowerWall is also being used with Fakespace's ImmersaDesk(TM) C1 and pinch gloves, already owned by UC Davis for research in collaborative virtual environments.

"We considered using polarized passive stereo technology," said Oliver Staadt, Assistant Professor from the Computer Science Department and Director of the Virtual Reality Lab, "but the screen gain required to make passive stereo acceptable is too high for tiled wall environments. This is especially true in motion tracked applications when the user is close to the screen."

The UC Davis installation is just one example of the increasing demand for Beacon-based visualization systems. Fakespace has also recently installed a Beacon-based PowerWall at the State University of New York (SUNY) in Buffalo for use in driving simulation and it installed a Beacon-based immersive desk display at Robarts Research in London, Ontario, Canada for minimally invasive surgical technique simulations.

"One of the biggest benefits of Beacon technology is that we can produce high quality stereoscopic images at any resolution," said Chris Clover, CEO of Fakespace Systems Inc. "As a result, the Beacon XG is the world's only native XGA resolution active stereo projector. It is a very affordable technology for entry level users or to use as building blocks for ultra-high resolution collaborative displays."

Before Fakespace introduced Beacon technology, the options for generating 3D virtual reality-type images were either 3-chip DLP projection or polarized projection technologies. Stereoscopic displays require separate left eye and right eye perspectives of a 3D model for the user to discern the depth of the object. Historically, active projection has used a single, specialized projector to produce sequential left eye and right eye images that are separated by electronically shuttered LCD glasses. Polarized systems use two projectors and filters that alter the projected light to horizontal and vertical orientations that are then appropriately blocked by

matching filters in special glasses worn by the user. Available exclusively from Fakespace, Beacon technology is a hybrid, utilizing two commodity projectors for left eye and right eye shuttered by electronic filters.

The significant cost reduction of Beacon XG over specialized projectors allows more users access to the technology. Compared to polarized systems, Beacon technology provides greater fidelity and is more versatile since it does not require the use of special projection screen material. It is also better suited for folded-optics (mirror-based) systems that reduce projection distances in rear projection applications.

Kopin to Exhibit Advanced Displays and Subsystems at the SPIE Defense & Security Symposium

3D-News Posted: Thursday, March 31, 2005 (8:37 UTC) | **Posted By:** Webmaster

Kopin® Corporation announced that it will exhibit a full range of CyberDisplays® and subsystems at the SPIE (International Society for Optical Engineering) Defense & Security Symposium being held from March 29th through April 1st in Kissimmee, Florida. The exhibit includes display products available today as well as emerging high-performance displays currently under development.

Among the highlights of the exhibit is also the CyberDisplay SVGA display. It offers stunning color with an 800 x 600 resolution in a 0.59-inch-diagonal package. The displays are manufactured with Kopin's proprietary color-filter technology and patent-pending low-voltage interface, resulting in power consumption less than 100 mW. The CyberDisplay SVGA is perfectly suited to high-resolution, full-color applications such as helmet-mounted displays (HMDs), mobile video eyewear products, 3-D stereoscopic video, and mobile computing applications. Low-rate initial production versions of the SVGA displays are currently available, with volume production scheduled for the fourth quarter of 2005.

SVI Launches New SVI VisionTester

3D-News Posted: Thursday, March 31, 2005 (7:24 UTC) | **Posted By:** Webmaster

3D technology enables the use of a new investigational procedure in ophthalmology

An ever-growing number of people are suffering from positioning defects and movement disorders of the eyes. Dysfunctions of this kind are becoming widespread, especially with the growth in working at the computer. The consequences can be sight defects, weak vision and severe impairment of quality of life. Early detection is a fundamental prerequisite for lasting treatment of disorders of this nature.

Eye specialists and opticians now have a new process at their disposal, based on 3D technology, to enable them to recognise disorders using modern methods that are tailored to each individual patient. The SVI VisionTester system from Spatial View Inc is designed for the investigation of sight defects, especially in the area of spatial vision. It provides the eye specialist with a range of static, interactive and dynamic tests for examining visual acuity in accordance with standard EN ISO 8596 as well as the stereoscopic (spatial) sight.

Whereas conventional stereo eye tests employ different tools consisting of binocular pictures and viewing devices, the SVI VisionTester system combines many of these tests in a single compact PC workstation, using a 3D application as its basis. Patients are presented with binocular pictures on an autostereoscopic display (3D). Particularly worthy of mention is the integration of dynamic stereo tests such as the presentation of moving random dot stereograms. This provides a simple way of checking the dynamic stereo vision, especially in children. The use of a 3D monitor eliminates the need for irritating and disorienting aids such as red-green glasses. The test content is randomly selected, thereby preventing it from being 'learned' by the patients. A great wealth of test methods can be handled easily and intuitively. The lightweight, transportable system is also ideally suited for investigations away from the clinic.

The SVI VisionTester offers a test environment that is suitable for children, allowing the eye specialist to produce and incorporate his or her own test content, such as child-oriented pictures. For the first time the SVI VisionTester combines, in a single system, a large number of test procedures that are conventionally performed using a range of different tools.

The term binocular vision is used to describe the ability of the human eye in normal position to perceive two separate pictures of the same object, which are then combined in the brain to create a spatial impression. If the images do not coincide as a result of eye defects, this has to be compensated for by additional work on the part of the optic muscles and the brain, sometimes with devastating consequences for the quality of life.

Those affected often suffer from neckache or headache and even migraine. They have difficulty in concentrating or are regarded as clumsy because they have problems with spatial coordination. According to studies, in a normal school class two to three children are conspicuously affected. With adults, the rate is even higher. The investigation and treatment of eye coordination defects, carried out primarily during childhood by the eye specialist in collaboration with the orthoptist, can be of critical importance for the future development of the child, since inadequate sight or lack of spatial vision may pose limitations in his or her personal and occupational development.

About Spatial View
SVI, a Canadian / German corporation, takes your visual communication to the next level in a true three-dimensional space. Having acquired know-how from pioneers in the field of 3D imaging, we offer applications independent of hardware manufacturers and/or operating system in this field, providing comfortable coupling of 3D interaction and presentation on any auto-stereoscopic output devices.
For more information, see http://www.spatialview.com

3D Personalities: Askar Akayev

3D-News Posted: Thursday, March 31, 2005 (7:10 UTC) | **Posted By:** Webmaster

Askar Akayev served as president of Kyrgyzstan from 1990 until his apparent ousting on March 24, 2005.

He has a PhD in Technical Sciences (Holography) and is an Academician of the Kyrgyz Academy of Sciences.

He graduated in 1968 from the Leningrad Institute of Precision Engineering and Optics, and then did postgraduate studies and held the positions of Laboratory Assistant and Engineer at the same institute.

NJIT team designs driverless vehicle to enter the grand challenge

3D-News Posted: Thursday, March 31, 2005 (7:00 UTC) | **Posted By:** Webmaster

A team of students from New Jersey Institute of Technology (NJIT) is designing a driverless vehicle that will compete in a national race in which it must navigate 175-miles of daunting desert terrain.
If the unmanned vehicle is the first to cross the finish line in a 10-hour deadline, the NJIT team will get $2 million from The Defense Advanced Research Projects Agency (DARPA), the race's sponsor. DARPA is the central research and development unit for the U.S. Department of Defense.

Known as the Grand Challenge, the race is scheduled for Oct. 8, 2005. DARPA does not reveal the location of the course until race day. But the race is expected to take place in the Mojave Desert somewhere between Los Angeles and Las Vegas.

The NJIT team is an alliance of 15 students, faculty advisers and corporate sponsors including IBM, BAE Systems, L-3 Com and General Motors (GM). The companies have given the students funding, components, technology as well technical advice.

GM donated a 2000 Chevy Blazer, which the students are now busily transforming into an unmanned robot, which they have named Optimus. Thanks to sponsors, the students are outfitting Optimus with a stereoscopic machine-vision camera, a GPS-guided system and laser-radar. The students will also retrofit Optimus with computers and software to point sensors along intended routes, sensor-fusion algorithms, and automated swerving technology that will let Optimus maneuver at high speeds.

Immersive 360 Degree Panorama at the 3D Center of Art and Photography

3D-News Posted: Thursday, March 31, 2005 (6:43 UTC) | **Posted By:** Webmaster

Ready for a totally immersive 3D experience? "Perficere" wraps visitors in a 360 degree panorama exploring space, depth and perception in a murky, moody, yet beautiful world. Artists Adrienne Taggart and Ted Grudowski will appear at the artists' reception on First Thursday, April 7, from 6 until 9 p.m.

The stereo theatre will present Provence, an award winning slide show capturing the charm and joie de vivre of the French countryside. Photographed by Albert Sieg, the Photographic Society of America's most honored stereographer, the program will be shown hourly.

The 3D Center also houses a collection of antique and contemporary stereo cameras, viewers and other devices. Information panels and interactive displays explain the phenomenon of 3D vision. The Center's collection of stereocards are available for viewing and the reference library is open to visitors. There are daily 3D slide projections.

Open Fridays, Saturdays, Sundays from 1 pm until 5 pm. Open First Thursday from 4pm until 9 pm. Admission by donation. 1928 NW Lovejoy, Portland/Oregon, USA. Tel.: 1 (503) 227-6667, Web: http://www.3dcenter.us.

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