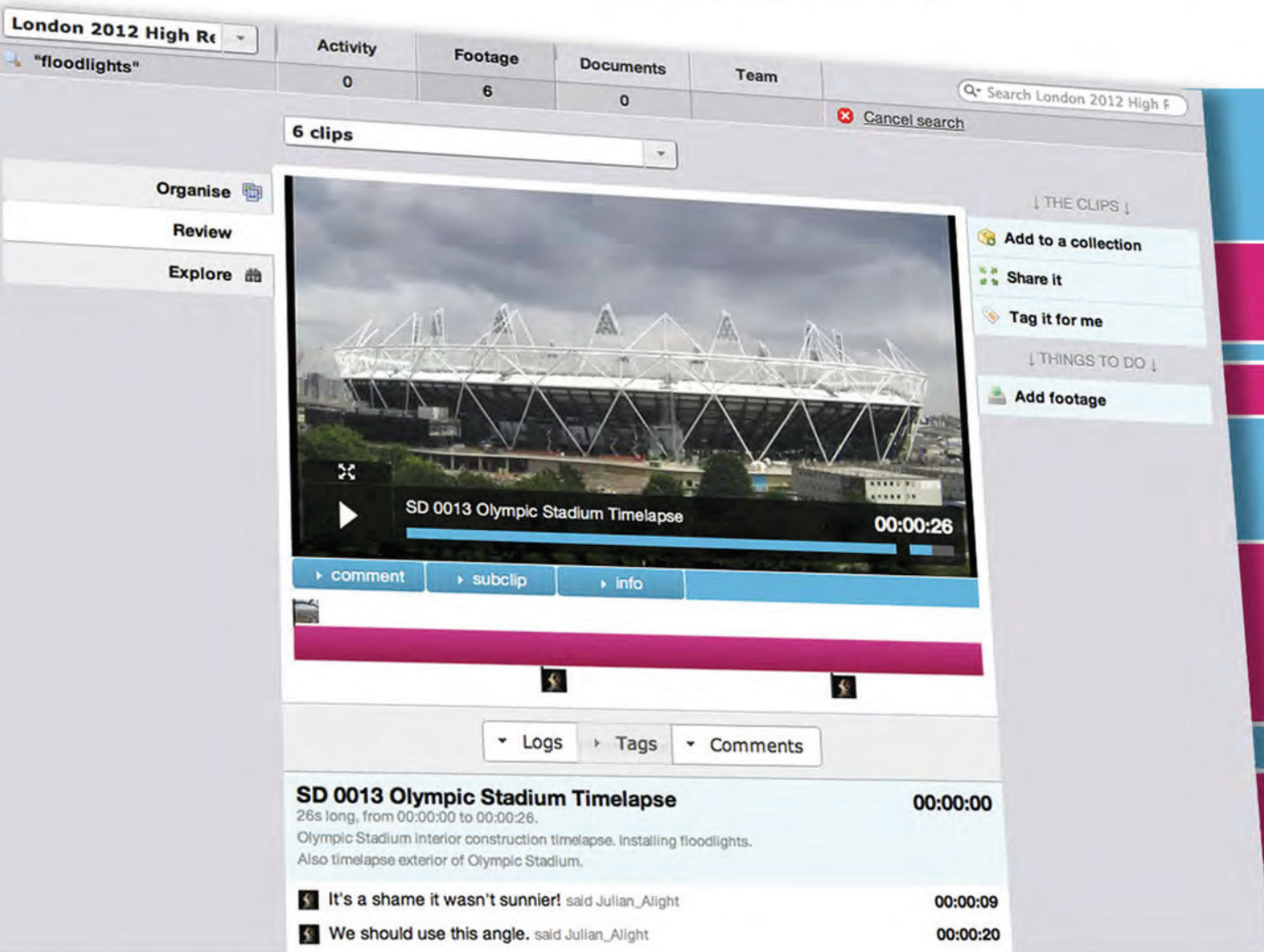


Entertainment Engineering

OLYMPIC CLOUD VIDEO PRODUCTION

London's Olympic Delivery Authority (ODA) uses high-speed system to distribute important clips.



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PNEUMATIC HAND • MATRIX INTERCOM & KEY PANELS

MOTION CAPTURE "SNOW WHITE & THE HUNTSMAN"

ASTRONAUTIC MOTORS • TECHNOLOGY CROSSOVER • MORE...

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Persun & Wiebusch, Inc.

Publishers/Editors:

Terry Persun

P: 360-379-6885

E: terry@entertainmentengineering.com

Bruce Wiebusch

P: 440-503-3013

E: bruce@entertainmentengineering.com

Design & Production:

Verv Creative

www.vervcreative.com

Editorial Contributors:

Dan Cook, Ph.D.,

Program Coordinator, Entertainment Engineering and Design, UNLV

Gerald Braude

S. Korobeinik

Richard Mandel

Mark Persun

Editorial Board:

Greg Hale, VP Advanced Technology
Disney Parks and Resorts

Kevin Russelburg, Sr. Project Engineer
ITW Pancon

John Lewis, Sr. Writer, Cognex Corp.

Sales

Mark Wiebusch

Vice President, Media Solutions & Sales

P: 440-835-9733

markw@entertainmentengineering.com

Subscriptions:

www.EntertainmentEngineering.com



OLYMPIC ENGINEERING

Did you know that the Olympic games began in 776 BC in Olympia, Greece? Although the original games featured mainly athletic competitions, there were also combat competitions, chariot-

racing events, and other militaristic games. The games were originally held in honor of the Greek God Zeus.

The games were the one thing that could postpone all conflicts among the ancient participating "city-states" until the games were finished. During the celebration of the games, an Olympic Truce was enacted, so that athletes could travel from their countries to and from the games in safety.

Technologies can sometimes be a little like the ancient traveling athletes. They originate from one place, but end up competing and doing their things in places far removed from their origins. That's what happened with iTrack Navigation technology and Vetex Omni-Directional Technology. They started in the military, but now these same technologies are being used in theatre, movies, and television.

Read Entertainment Engineering's exclusive interviews with Jerry Atkinson, the CEO of iTrack LLC, and Nick Fenelli, President of Vehicle Technologies, Inc. (Vetex) about how they took what was originally developed for military applications and re-applied it for a Star Trek movie, the Mythbusters television show, and other entertainment applications. The two first collaborated on a U.S. Army project involving Omni-Directional Security Vehicles. All of this prior experience is now being used for theater, and overall entertainment industry, to autonomously navigate and control most any vehicle or mobile stage prop.

For more on the 2012 Olympics, read our story about how Aframe recently expanded its private cloud network to allow professional video creators to share, search, and collaborate without on-site equipment or full-time staff. Instead of using time-consuming and costly DVD distribution to circulate clips, Aframe's online service sent content to Olympic accredited broadcasters across the globe, including the BBC, ITV, Sky, NBC and CNN.



Bruce Wiebusch
bruce@entertainmentengineering.com

TRACKING TECHNOLOGIES USED BY MILITARY . . . AND MOVIES?

A marriage of technologies, each having roots in different areas, improves entertainment, military, and other industries.



Imagine moving an entire concert stage around a venue like a hockey rink, turning it into a “Theater in the Round” where every seat can become the best seat in the house. How about moving a large green screen around a complex camera shot, creating the effect of a very, very large green screen for a Mad Max movie? Or, imagine a futuristic vehicle in a futuristic movie like Star Trek.

The marriage of iTrack Navigation technology with the Vetex Omni-Directional Technology is beneficial to these entertainment applications. But there could be many more ways to leverage this marriage for the good of other entertainment applications.

Jerry Atkinson, the CEO of iTrack LLC, and Nick Fenelli, President of Vehicle Technologies, Inc. (Vetex), a manufacturer of Omni-Directional vehicles including the SIDEWINDER Lift Truck, got their start working together for the military. They first collaborated on a U.S. Army project involving Omni-Directional Security Vehicles.

“It was all of this prior experience that led me to intro-

“We can now offer to the theater, and overall entertainment industry, the ability to autonomously navigate and control most any vehicle or mobile stage piece,”

duce iTrack to the Sight & Sound Theater, after I had gotten the contract to provide the platforms for mobilizing the Jonah sets,” says Fenelli. “The UWB radio based TNS-400 system that iTrack was developing seemed a better option for the theatrical environment than the laser or vision-based navigation systems from other vendors, which can also be used with our system.”

iTrack was able to insert their Autonomous Vehicle Controller (AVC) between the Vetex manual hand-held controller and Vehicle Master Controller on the CAN bus, and introduce a switching scheme that enables seamless change over from manual control to control via Sight & Sound’s Stage Management System from Niscon.

“Future customers will not be limited to the Niscon System,” adds Fenelli. “The TNS-400 can be configured to work with other systems such as the Navigator Automation System or eventually a management system of iTrack design.

Our Omni-Directional vehicle control system contains

ative staffs to dazzle the audience with a variety of easily reprogrammable and multiple freely moving set pieces, in a way that has never before been technically available to the entertainment industry,” says Atkinson.

Department of Defense R&D funding supports development of iTrack’s wireless tracking, positioning,



a Vehicle Master Controller which receives three-axis speed and direction commands from the AVC via the CAN bus, based on the trajectory commands from the Stage Management System. The VMC computes the required speed and direction command for each independently driven wheel and sends it via CAN bus to the appropriate wheel motor’s closed-loop servo controller. The vehicle master controller and wheel motor controllers used come from Kollmorgen. Other critical system control components are sourced from reliable suppliers such as Penny & Giles and Deltran.

“We can now offer to the theater, and overall entertainment industry, the ability to autonomously navigate and control most any vehicle or mobile stage piece,” says Atkinson. “Our autonomous navigation technology is being used by Sight & Sound Theaters of Lancaster, PA to control multiple set pieces for their production of Jonah.”

A sixty-foot boat, two 30-foot trees, and a 20-foot gate continually move throughout the entire show without any human intervention. “Our combined technologies empower, for the very first time, engineering and cre-

and navigation technology. “We are now actively commercializing this patented technology,” adds Atkinson. “In addition to working with Sight and Sound Theaters, we are currently working with Northrop Grumman Aerospace systems to customize a tracking and positioning system for their needs.”

iTrack has customized its millimeter-precise TNS-400 Tracking and Monitoring System to meet specialized needs of the Northrop Grumman. Considerable information relative to the technology’s application in this project cannot be released due to its military importance.

SIDEWINDER Lift Trucks have been featured in multiple major motion pictures, including the most recent Star Trek feature from Paramount Studios, and appear regularly in the Discovery Channel show Mythbusters.

For More Information Click Below:

[Deltran >](#)

[iTrack Home >](#)

[Kollmorgen >](#)

[Penny and Giles >](#)

[Vetex Home >](#)



forward to use, which is important when it comes to coordinating an event of this size,” said Phil Kidd, Delta Sound’s Project and Comms Manager. “The Eclipse Median systems and V-Series panels were easy to set up and we didn’t have to spend much time training people to use them. We also liked the ease of interfacing with other communications systems, such as the walkie-talkies used along the route of the royal procession.”

Clear-Com’s Eclipse family of digital matrix intercoms provide a flexible and scalable foundation for point-to-point and group-based multi-connections, supporting up to as many as 3120 user connections on a networked system platform. The Eclipse Median, which comes in a 6-RU frame that houses two CPU and eight matrix slots, with eight built-in interface module slots, is uniquely designed for mobile flight-case systems or any produc-

tion environment where rack space is limited.

Fully compatible with the Eclipse systems, Clear-Com V-Series panels are a comprehensive set of advanced, fully programmable digital key-panels that come in rotary, pushbutton, or lever key form. The V-Series panels feature Digital Signal Processing, 10-character OLED display, international-character support, 8-shift key, and Listen Again memory. All V-Series panels can be connected to the matrix system via digital AES3, Co-ax, RJ-45, or over standard IP.

For More Information Click Below:

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Step 3: Add Scenery and Cast

