



The Capture Lab

Vantage Provides the Complete Package for the Capture Lab



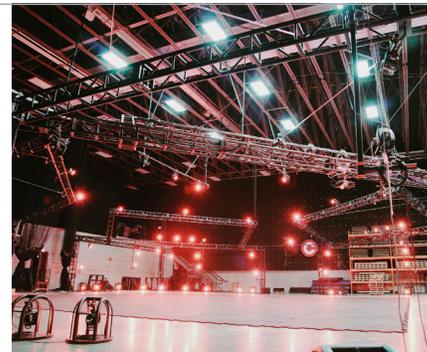
Image courtesy of The Capture Lab

“With the sheer volume of data that we capture and process, we rely on the cameras, software and hardware to perform together flawlessly every time. Downtime isn’t an option, and Vicon’s system keeps us up and running.”

[Jeremy McCarron, Director of Strategy at The Capture Lab](#)

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The Capture Lab shoot volume

Vicon Vantage Provides the Complete Package for the Capture Lab

From larger-than-life video game franchises to interactive technology, The Capture Lab in Vancouver, Canada is the largest motion capture facility in the world. For more than 20 years, it has contributed motion capture, digital doubles, facial animation, and virtual camera services to more than 225 high-end animation, video game, and visual effects productions around the world. The Capture Lab now works exclusively with Electronic Arts (EA), a leading publisher of games on console, PC and mobile platforms, most known for top titles like Madden NFL 17, Battlefield, and EA Sports FIFA 17.

Upgrade and implementation

The Capture Lab has been using Vicon technology for more than 12 years, with their previous system consisting of Vicon's MX and T-series platforms. "While these platforms have been a real workhorse for us, we were starting to reach the ceiling on what we could achieve," says Troy Thibodeau, motion capture specialist at The Capture Lab.

After evaluating a number of systems, The Capture Lab chose to upgrade to Vicon Vantage. As the next-generation camera

platform, Vantage combines advanced, powerful, and intuitive features, making it easy to use and accessible for the new generation of motion capture applications.

The Capture Lab determined that the Vicon system provided the most robust solution, especially when compared to the other systems they were assessing. "After evaluating several platforms, we saw the value in Vantage – the V16 specifically," says Thibodeau. "The Vantage platform has certainly helped us to keep up with the high demand from EA. Capturing clean, quality data means that our processing pipelines are streamlined and we can maintain delivery of the large quantity of data required to continue to fuel EA's triple-A titles."

Thanks to the Vantage architecture The Capture Lab is able to augment its capture volume in ways that they simply never could before, allowing them to achieve new and unique capture scenarios. The system also helps the lab achieve more cubic volume coverage from each single camera, which helps during their larger captures. Another reason The Capture Lab chose Vantage is because it ideally fits into the lab's processing infrastructure, and with the massive increase in data quality they can see instantaneous results.

"The Vantage camera is a great piece of technology, superseding the coverage scope and precision marker fidelity of our previous cameras," explains Thibodeau. "You need more than just great hardware to facilitate motion acquisitions and Vicon provides the complete package, with an advanced software suite that is completely customizable and scalable for our unique needs."

Vantage in action

The Vantage system has brought numerous features and benefits to The Capture Lab, including higher fidelity data quality, denser camera coverage using less cameras than their previous system, higher resolving power, easier system maintenance and organization, and overall stability. The Vantage camera feedback has also provided The Capture Lab with greater ease of use – especially with large camera counts.

According to Thibodeau, The Capture Lab's decision to upgrade to Vantage was due in part to its fast and simple configuration into the Vicon platform: "The robustness of Vicon's software and its seamless integration with Vantage have allowed our setup times to decrease, while increasing the amount we can capture, and most importantly, the quality of our data," he says

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Motion capture stunt work

"The new Vantage camera uses a standard Ethernet connection schematic with very stable connectivity, which has allowed us to build connection hubs around our studio," Thibodeau says. "With the amount of acquisition that The Capture Lab provides, we're frequently reconfiguring our volume to accommodate new and unique shooting opportunities. With previous camera systems, it would take days to re-cable and reposition our cameras, but with Vantage and our unique connection hubs, we're able to completely reconfigure our volume in a matter of hours!"

The lab was initially enthralled with the amount of coverage a Vantage camera provides, but Troy and his team still continue to find benefits from other features the camera offers as well. "The 'Tap to Select' feature has helped us expedite our camera aiming times, especially when you've got higher camera counts," he explains. "The Vicon Control app also gives us the ability to monitor the data from anywhere in our studio, and the color coded indication lights and LCD screen on each camera have helped to keep everything organized and alerts us to potential degradations to our captures."

"The Capture Lab has always been a studio that uses visible strobes, but our switch

to Vantage marks the first time we've ever used full IR light in any production," Thibodeau says. "We've certainly noticed less fatigue from the actors and direction crew as they're not immersed in intense lighting conditions all day."

The lab also has a dedicated space for capturing range of motion (ROM), and has recently added four Vicon Vue reference cameras to this particular stage. Vue gives the lab extended control while setting up solving skeletons by providing calibrated video overlay of the ROM. As a turnkey solution, the Vue system simply plugs into their stage and provides an instant, synchronized and calibrated video solution. The solution further advances the quality and fidelity of final motion solves by enabling the lab to refine setups with a greater level of control than before.

A partnership built on collaboration

As the motion capture industry has developed, the need for real-time information and feedback during shoots has never been greater. To meet this need, Vicon continues to develop solutions that are powerful, flexible and resilient. "When we made the decision to choose Vicon, we not only brought in a complete hardware and software solution, but we added a

valuable partner to the The Capture Lab organization," Thibodeau says. "Vicon has always provided swift feedback, and truly works with us to help resolve issues, and generate new solutions for complex problems. The support is prompt, the people are passionate, and they provide top-tier products and innovations that continue to support us in providing paramount motion acquisitions."

According to Thibodeau and his team, Vicon has been a great partner; always listening to their needs and communicating with them to provide the best solutions. "Working with Vicon, we have iterated and improved almost every aspect of our motion capture shoots," he says. "The end result is the most robust capture system we've ever used – one that's easy, feature rich, and provides the highest of quality."

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- | Accurately capture complex gait models
- | Easy to set-up, easy to use systems
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Gait Analysis

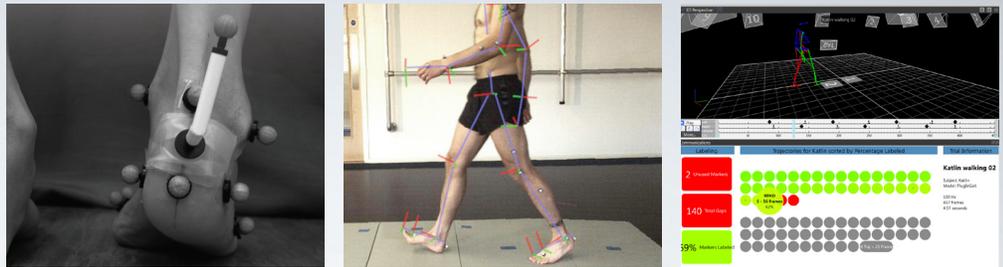
Industry-leading accuracy, high-resolution hardware, and flexibility offered in one fully-integrated solution.



"Gait analysis has greatly improved our understanding of gait problems in cerebral palsy. It enables us to evaluate the pathology more accurately before surgery and to assess our outcomes after surgery has been done and treatment of these children continues to improve."
Dr. James Gage, Gillette Children's Hospital, St. Paul Minnesota

Pioneering motion capture since 1984.

Gait Analysis Accuracy and flexibility.



From assessing clinical patients to capturing accurate research data, Vicon provides a range of optical and digital video systems designed specifically to suit your needs in any Life Science or Gait environment.

Clinical and Research Applications

Clinically Accepted Models

Thousands of trials from sites all over the world have been captured and analyzed using Vicon solutions over the past 27 years, and Vicon is the clear choice for accurate data and application-specific flexibility. The protocol is well understood, clearly documented and thoroughly researched. From Vicon Clinical Manager (VCM) launched in 1992, to the release of the current Plug-in Gait, you can rely on Vicon as your trusted partner for industry-leading Gait research and analysis.

Complete and Integrated Solutions

Vicon can supply everything you need for your integrated gait analysis solution. Capture highly accurate movement information along with synchronized data streams from other measurement and video devices including force plates, EMG (Electromyography) systems, and reference digital videos, all accessed through one easy-to-use Vicon software platform. Save time and effort by purchasing your force

plates and EMG systems directly through Vicon, as we are distributors for the highest quality brands of these components in the world.

Applications

As the industry leader in motion analysis, Vicon has been used clinically to assist physicians, surgeons and physical therapists in over 50 countries worldwide, assessing patients with a wide array of pathologies affecting motion. Common applications include the assessment of cerebral palsy, injury, stroke, prosthetics/orthotics, Parkinson's disease, and sports performance analysis.

Technology

Vero

Power. Flexibility. Performance. Vero is the latest generation of Vicon optical capture camera. Our smallest camera reliably captures precise motion data for smaller labs at an affordable price.

Vantage

Vicon Vantage optical motion capture cameras combine powerful electronics, intelligent sensors and efficient design to create the world's most advanced motion capture platform. Vantage systems require fewer cameras to cover a large volume, without impacting the fidelity of your tracking.

Clinical Software

Nexus

No other software package makes it so easy for users to perform daily routine tasks while at the same time offering complete customization and flexibility to suit any situation. This allows you to focus more on your research and less on your software.

The latest version of Nexus includes new features and workflow improvements designed to enhance your software's functionality.

Polygon

Vicon's unique reporting software, Polygon, is fully integrated with our data recording software, enabling your gait analysis data to be visualized as soon as a walk has been completed. Any report can be saved as a template, improving efficiency and ensuring you spend more of your time with patients rather than re-creating the same reports.

ProCalc

Vicon ProCalc is a visual application for creating custom kinematic models, variables and event calculations using a simple wizard-based system. Load C3D trial files, create new calculations and visualize outputs in an integrated 3D workspace. Variables and events calculated in ProCalc can be written back into the C3D file or exported directly to Excel.

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