

PUBG STUDIOS IS GETTING INCREDIBLE RESULTS WITH THE USA'S FIRST VALKYRIE SYSTEM

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Caitlin Fifield, Stage Manager for PUBG STUDIOS

KRAFTON's PUBG STUDIOS is used to being an early adopter. The team was at the forefront of the wildly popular battle royale video game genre when they launched PUBG: BATTLEGROUNDS in 2017. Its innovative game design has resulted in one of the best-selling video games of all time. Now, the developer is at the leading edge of digital production with one of the most powerful motion capture systems in the world, having recently partnered with Vicon to install the first US-based Valkyrie-powered motion capture stage in its Madison, Wisconsin studio.

PUBG Madison was in talks to buy a Vicon system while Valkyrie was approaching launch, even though at the time very little had been said about the camera publicly. There was a question around whether to purchase

a Vantage system or be among the first customers to get the then-unknown Valkyrie cameras. "Ultimately," says Caleb Zart, Animation Director at PUBG Madison, "making it withstand the test of time and be the greatest system it could be—that was an easy decision for us to make."

The company bought 26 VK26 cameras, the first Vicon product to push 26 megapixels, establishing the first Valkyrie installation in the US in a purpose-built new studio in Madison, Wisconsin.

One benefit of choosing Valkyrie was apparent before a single camera had been set up. "One of the really nice things about the Valkyrie transition is we were able to get a lot of coverage with fewer cameras," says Zart. "With the previous generation we were slated for 36 or 40 units.

The prospect of going through and focusing all those cameras is obviously significantly more labor-intensive than focusing a simple 26. It's just less to worry about. Especially with our studio having high ceilings—it means less time up ladders."

Caitlyn Fifield, Stage Manager for PUBG Madison's motion capture studio, has found establishing both the setup and her workflow to be a smooth process. "Getting the pipeline set up has been a fun and collaborative process. I worked closely with the tech support who helped with the install, and who also fielded my questions after, to adapt things to our needs even more with each shoot," she says.

"It was a great experience getting things rolling and starting new pipelines, without old habits that we were happy to get rid of. There's also much more documentation than I'm used to with other mocap systems, which let me hit the ground running before we even received the cameras. And the first few captures went smoothly. It was really exciting doing those first couple of shoots."



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Animation Director,
PUBG STUDIOS**



Zart says that the new setup immediately began sparking creativity in the studio. “We’ve just started playing around, throwing new assets into the shoots,” he says. “During one session we were building campfires live while the actor was improvising, miming warming himself in front of the fire. We didn’t plan to do that. That flexibility and review quality is something that Caitlyn and I aren’t used to.”

While the setup is still new, it has already been used for a number of projects, including the animation of new zombies for PUBG: BATTLEGROUNDS’ zombie mode. The data was captured in the Madison studio then shared with the team in Seoul for cleanup and animation.

“We have been doing a fair amount of the retargeting directly inside Shōgun,” explains Fifield, discussing the new pipeline. “We’ll live-retarget the actor solve that Shōgun comes up with to the PUBG skeleton or the Unreal Engine mannequin, and that gets us most of the way there for any of the more standard content that we’re shooting. We can run that fbx

export through our Maya tools to put the data on our animation rigs. And when I do need to feed the data into other software, it’s easy to get what I need out of Shōgun.”

SUCCEED FAST

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“Getting everything rolling during the shoot day, calibration, getting the actor set up, it’s all faster,” adds Fifield. “The real-time being so solid is incredibly cool, too, and the playback switching is really fast and smooth if we need to compare takes.”

“It’s so solid,” says Zart. “We shoot movements where the person falls on the ground and their entire chest or back suite of markers is totally obscured, but the system doesn’t blink. We don’t have to stop the shoot to fix things and re-identify lots of markers in order to review it in real time. We just keep going.”

The speed at which PUBG Madison can operate its Valkyrie system has a tangible impact on the studio’s work. Zart gives an example: “We have arm extensions for creatures that don’t have humanoid proportions. We captured some data with them, and were able to adapt to that in real time without sending everyone away for 20 minutes while we adjusted everything.”

The utility of Valkyrie for virtual production has been an asset, too. “Our leadership group was appropriately impressed by being able to have content up and running live in Unreal. Being able to see a live action non-human creature that we had been working on inside the level that we were developing is really useful.”

The uptick in speed stretches beyond sessions in the studio. “The data processing has been really fast, and we’re getting the quality we need out of it. Shoot sessions that I’m used to potentially taking a significant amount of time, I have delivered in less because of the robust post processing.” Fifield says.

It has all added up to boost PUBG Madison’s creative output.

“We’ve been doing a lot of internal prototyping on some unannounced things,” says Zart. “That speed, where we can just churn through material really quickly, is incredibly valuable in that arena.”

The coverage Valkyrie offers is making performance capture shoots easier on a technical level, and it is also enabling PUBG Madison to create content it wouldn’t have been able to produce before. “One of the things that we’re most excited about is the amount of distance we can cover,” says Zart. “Because of the Valkyries, in tandem with the size of the space, we have a lot of options. We can do bigger shoots where you might have multiple people traversing a bigger area without having to stop, reset, and move all of our set pieces and start again, and then stitch that all together on the back end.

“That gives us more flexibility to experiment and lets us keep the flow of a scene moving without having these hitches. It helps with the work downstream, but it also helps the actor on stage stay in character and not have to think so much about the technical facets of motion capture. It allows them to focus on the most important aspect of the shoot—their character and their performance.”

To learn more about PUBG: Battlegrounds, visit: www.pubg.com

