

# VIRTUAL PRODUCTION

## – SimulCam

Bringing together Vicon's industry leading tracking of both rigid object and full body subjects, the virtual production pipeline allows users to track film and video cameras alongside highly realistic digital characters, with fingers and face, all within the Shōgun platform.

### FULLBODY TRACKING

Characters come to life using Vicon's fullbody tracking solution, supporting high fidelity fingers and FBX / USD character retargeting, all within the Shōgun platform. Streaming directly into the game engine, removing 3rd party software, delivers the data at the lowest latency possible.

### OBJECT TRACKING

Any object with markers in the volume can be tracked and streamed within the space. This could be a prop, interaction device or set scenery. This is all tracked using Vicon's super low latency, industry leading tracking algorithm which supports the ability to track an object from a single camera.

### GAME ENGINE

Data is streamed directly from Shōgun into the Game Engine as quickly as possible, using separate channels based on the type of data. Cameras and rigid objects are delivered first, guaranteeing the lowest latency possible. Fullbody characters are then sent on a different channel with SDI video being sent separately. This delivers the optimum performance for a seamless SimulCam solution.

### VICON CAMERAS

This solution works across the full range of Vicon cameras including Vantage, Vero, Viper and ViperX. High resolution and low latency optical tracking that works both inside on set and outside on location. No matter your budget there is a camera solution that will work for you.

### OPTICAL BASED LENS ENCODING

New to Shōgun is the ability to quickly re-calibrate a single SDI camera, allowing users to build a lens model for Focus, Iris and Zoom (FIZ). Optical markers placed on the camera lens allow the FIZ data to be tracked and sent into the game engine giving the user the ability to change the focus on the camera lens and see the result on the SimulCam.



### SDI VIDEO CALIBRATION AND TRACKING

SDI video cameras can be calibrated for both Intrinsic and Extrinsic using Vicon Shōgun software. Supporting up to 4 \* 4K video streams, the SDI camera is calibrated as part of the main wand wave process. Once calibrated, the camera can then be moved around the volume and calibration is maintained.

### PASSIVE / ACTIVE

This solution works with both our traditional passive marker system or active marker system. We have created new passive marker stalks that can be attached to the SimulCam and offer smooth, reliable tracking. Our Nova Active Strand can also be attached to the camera if you want to capture outside in direct sunlight for example.



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