SKYSPORTS: HYBRID MOCAP FOR GOLF OPEN CHAMPIONSHIP

Combining volumetric capture and motion capture to analyse the swing of professional golfers, the groundbreaking 'Sky Scope' at last year's Open recreated some of the star players using holograph replicas.

While volumetric capture can capture a certain amount of movement, it won't capture the speed at which the club is travelling. Target3D formed part of the team working in the Dimension Studios new Polymotion Stage, overseen by MRMC, to create a hybrid solution of the volumetric capture with an optical system, using optical markers to track the swing of the club.

This enabled the animators to receive the golf club data, receive the motion data and apply them together in post-production. The final result is of the holograph golfer performing his swing in 3D. The speed at which the club travelled and the projection are both trackable and analysed.

YouTube link: The 148th Open | Sky Sports' Volumetric Capture Introduction

Take a look behind the scenes in this video of Dimension's volumetric capture studio.

Projects like this need development to get right so from the very first tests at Studio T3D, weeks and weeks of test followed in the lead up to the install and roll out.

First, we mimicked the dome in another location. The volumetric team set up their rig then Target3D set up the motion capture rig, both systems were calibrated before a ‘worlds align’; the volumetric virtual space and the mocap virtual space were mapped together to get the correct X, Y and Y coordinates. This makes it easier for the animators later to line up the data from the optical system with the data from the volumetric capture system.

Target3D’s Petros De Doncker looks back on the project,

“This hybrid solution has been done before but not at the quality level of this. Previously, in the States it’s been accomplished a 2k results, our volumetric capture tests went up to 4k."

"As a sports enthusiast, when I look at training in a 2D video the amount of info I get is very limited. For example, if the sportsman has his hand behind his back, I can’t see what that hand is doing – this hybrid solution enables us to be fully immersed into this experience and move around in 3D and 360. If I want to see how it’s performing from the left or right, or up or down, or bottom to top, I have the flexibility of moving around, seeing all the different angles and all imperfections that are not visible in 2D

videos. As a learning platform it's really useful, and for professionals themselves - they've seen it before with motion capture, they've seen it with swings, but they haven't seen themselves holding the club in performing the swing. It's genuinely ground-breaking."

"The exciting this is that it starts with golf, but you can think of any sport that contains a swing - tennis, cricket, squash, badminton for example. Because it's been proven with one sport, the other sports could use the same, a similar tracking technique."

We love a challenge! Speak to the team at Target3D to get your mocap, VR or AR project started.