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UFC — Paint

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Case Studies

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UFC's Performance Institute trains with ChyronHego Paint for detailed performance analytics

By now, most people are familiar with mixed martial arts (MMA) fighting and the foremost league in the sport — the UFC (Ultimate Fighting Championship). And while the sport and league are only 25 years old, a great deal has changed in those 25 years, and that includes the training of the athletes.

Leading that training is UFC's Dr. Duncan French, Vice President, Performance, at UFC's \$16 million Performance Institute (UFC-PI) headquarters in Las Vegas. Dr. French's main goal is health and wellness — to help athletes fight with less injury and proper technique. A big part of meeting that objective achieved by using ChyronHego's Paint sports telestration and analysis tool, which went online in September of 2017. While typically considered a live production "broadcast" tool, Paint has found its way into sports training for the same reasons broadcasters the world over us it: immediate coach/athlete engagement and descriptive analysis.

"We truly envisioned the UFC-Performance Institute as a world-class performance training center," said Dr. French. "Performance and video analysis technologies are commonplace, especially in 'invasion' sports like basketball, football and soccer. We wanted to establish that in the UFC-PI."

Unlike other invasion sports, MMA is a one-on-one, very fast action and complex sport, where the combatants come together very quickly, making their movements hard to track. Using Paint takes the athletes and coaches to a new level of engagement, without significantly interrupting training.

"We have three cameras aimed at the octagon [the UFC's fighting arena] and a large flat screen that the athletes can see without having to come out," said Dr. French. "That gives them and their coaches the ability to quickly review movement and put that knowledge to immediate use."

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The decision to integrate performance analysis into the UFC-PI was a simple one. "First, we wanted to keep up with the speed of the high performance 'arms race' of other sports, having the right tools in the facility to deliver the services the way we see fit," explained Dr. French. "Second, other sports spend hours and hours on 'film' study — coach and opponent analysis is ingrained in other sports. Professional MMA is only 25 years old and is quite infantile in the use of performance analytics. We purposefully wanted to bring those capabilities into the Performance Institute, to bring about an evolution of coaches and athletes to have a different way of evaluating themselves and their opponents."

While there are a number of options available in the market, there were three specific key features of Paint that quickly made it the top choice for Dr. French.

"Paint is so very user friendly," stated Dr. French. "Forrest Griffin [Vice President, Athletic Development, UFC] is the primary user of Paint. The user interface is very straight-forward — and that's the big value of Paint. We have coaches and athletes coming to us from all over the world; it would be hard to have a difficult to use platform and get them up to speed. It would create a huge barrier. Paint is almost plug-and-play. A quick five minute overview on system basics and they're up and running to evaluate performance, even though the technology in Paint is very advanced."

The second benefit that Dr. French saw from Paint was they did not have to waste time downloading footage. "It's super-efficient — immediate feedback. We pull live action and can stop the action in the octagon and immediately evaluate and integrate what we see. It's used in the action of coaching, going back-and-forth from training to evaluating, without athletes ever having to leave the octagon."

The third benefit of Paint is one that is familiar to all broadcasters: telestration tools. "We can look at and track parts of the body or movement patterns, and that's invaluable," said Dr. French.

When coaches and athletes first arrive at the UFC-PI and walk into the combat training space, the Paint system is the first thing they see.

"The first response is intrigue," said Dr. French. "Often, video analysis in MMA would consist of a coach holding a smartphone camera over the octagon. We explain how to use the system, and they immediately see the value. Once they see how easy Paint is to use, what it brings to

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technique analysis and how to integrate historical opponent footage, the wheels suddenly start to spin as they understand how Paint can help their technique and technical strategies."

Being able to train others to use the Paint system meant that Griffin had to learn it first. With its straight-forward user interface, that initial training typically takes two days to fully understand the hardware and the software. And like every piece of technology, the more you use it, the more skilled you become at using it.

"As a Paint user, you need to understand what you're looking for," explained Dr. French. "For Forrest [Griffin], as a former UFC Light Heavyweight Champion and UFC Hall of Famer, he understands where athletes are trying to get to from an MMA technique perspective and how Paint can help them find a solution. Technology and expertise are invaluable to support the athlete in their technical development."

An example would be a situational sparring session. An athlete is practicing a certain technique, such as an offensive takedown maneuver. They would do the move a number of times, review the Paint footage while still in the octagon to see how it looks, receive technical coaching and return to sparring.

"Sparring is more chaotic," said Dr. French. "In the past, you would shoot the entire session, beginning to end. Now we can start and stop at will and review the movements from three different synchronized angles. We can see a hand in this position and a foot in that position. The beauty is that there is no disruption; it's seamlessly integrated so athletes can review from the side while still inside the octagon. That's what the setup we have here with Paint allows coaches and athletes to do. That's actionable value."