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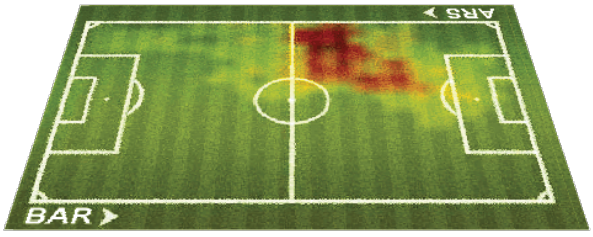
STATS SportVU Hits Big Time With UEFA Champions League

By: Jason Dachman, Assistant Editor

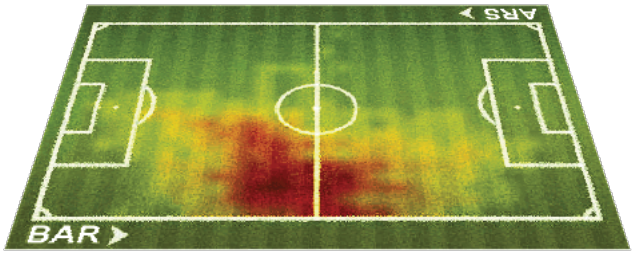
STATS LLC has brought its SportVU motion-tracking system to UEFA Champions League: teams like FC Barcelona and Real Madrid will now be monitored with technology usually used for missile tracking and target acquisition. Last week, STATS announced a deal to become the official motion-tracking–data partner for UEFA Champions League and will use SportVU to create unique graphics that illustrate such statistical data as player speed and distance traveled.

Says Steve Byrd, EVP of STATS, which acquired SportVU in December 2008, the UEFA deal "is a big step for us. We're extremely excited that UEFA is using SportVU for something as important as Champions League." SportVU has already been used for last year's MLS Cup (broadcast by ESPN), this year's A-League Grand Final (broadcast by Fox Sports Australia), and the Asian Football Confederation Champions League Final, but the UEFA agreement marks its highest-profile project to date.

The SportVU System



The system identifies and tracks the X and Y coordinates of the players and the referees on the pitch as well as the X, Y, and Z (elevation) coordinates of the ball 15 times per second in real time. From that, SportVU derives such stats as shot distance, player speed, distance covered, sprint time, passing tendencies, exact possession, and positional heat maps. The optical-based system requires no chips or tags on players and, therefore, is not intrusive on game action.



"This data provides the 'shape' of the team on the field," says Byrd. "Soccer is a game of space and motion, not a game of plays, if you will, that start and stop. It really shows where the players are

positioned. The heat maps show where a player has spent more of his time, if he's being stretched out of his position, if he's where the team wants him to be. The distance covered and the speed over time also show fitness of players and items like that."

The Camera Setup

Three cameras are positioned in one location, dividing the pitch into thirds. Each camera then tracks the players, referees, and ball in one-third of the field and captures five data points to accompany the video: an object ID, a time stamp, an X coordinate, a Y coordinate, and a Z coordinate. The coordinates are based on a prefabricated court grid that allows the software to place the objects in space.

The cameras are calibrated before the match. "We tell the system where to look and what to ignore, in essence to ignore everything outside of the pitch," says Byrd. "The cameras themselves are identifying, let's say, objects 1-25. We have an operator in the venue who is telling the system through an operator interface that object one is No. 12 for the red team and object two is No. 13 for the black team and so on. From that point, it just keeps that identification on that player and accumulates the data."

This data is used to create advanced charts and graphics for teams' personal use or for broadcasters to use during a telecast or online. STATS has built online live GameZone apps for broadcast partners in the past but not in the case of Champions League. Although UEFA technology partner deltatre built the live player tracker found on UEFA.com, the tracker is driven by SportVU data.

The quality of the cameras used for SportVU is of little importance, according to Byrd. In fact, despite the technology's sophistication, the system does not even use HD cameras.

"Honestly, the magic is in the software," he says. "We just use the camera [for motion capture], and the software takes it from there. We're looking at having higher resolution for some of the things we're working on for other sports because they're a little more complicated than soccer, but, at this point, the cameras are pretty standard fare."

Beyond Soccer

As for other sports, the NBA used SportVU for last season's NBA Finals, and variations of the software are currently in the works for cricket and American football.

"We are developing the application of this technology for a lot of other sports," says Byrd. "There's nothing out there yet and still plenty of work to do, but it's absolutely in development. We've got a lot of people working on this, to say the least."