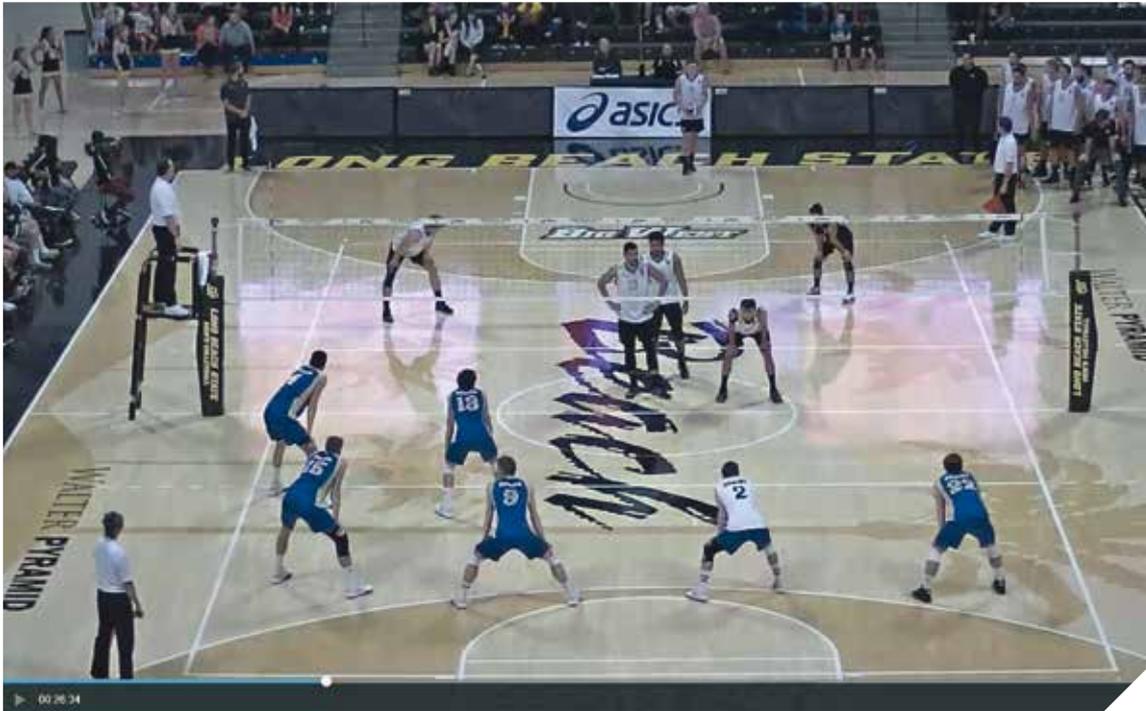


Analyzing the world of volleyball with Axis.

VolleyMetrics deploys Axis network cameras to assist teams in recording and evaluating the action.



Organization:
VolleyMetrics

Location:
Provo, Utah, USA

Industry segment:
Other

Application:
Event recording

Axis partner:
n/a

Mission

As a need presented itself in the world of NCAA volleyball, VolleyMetrics formed in order to provide an all-in-one video and analysis service to college programs and conference. Past tendencies showed that only a selection of teams able to send staff and equipment to record each of its matches, making some programs heavily reliant on the visiting team to share footage. VolleyMetrics set out to streamline this process and deliver additional value through player tagging and data compilation.

Solution

The team at VolleyMetrics assists collegiate programs in purchasing and installing Axis network cameras at various viewpoints in their gymnasiums. Fixed domes fit in spots that often get struck by balls while PTZ cameras give coaches the ability to break down specific focus areas with players during practice sessions. Further, the video from matches transmits back to the VolleyMetrics server where it is broken down and tagged for various events and actions.

Result

Coaches across the country are able to purchase access to a library assembled by VolleyMetrics. There is no longer a need to independently process and share video as this central storage makes video available on the internet to share and watch. Beyond the basic recordings, teams utilize a set of analytics gathered that show basic data sets like serves and touches as well as deeper insights into individual player impact and value.

“I looked at many solutions to speed up and make it easier to record practices and matches. If you look at the ratio between quality and price of Axis cameras and the amount of models offered, Axis is hard to beat.”

Giuseppe Vinci, Founder and CEO, VolleyMetrics.

Power alley of technology

Inspired by the use of Sabermetrics in baseball, Giuseppe Vinci and Austin Hayden worked with statistician Dr. Gil Fellingham of Brigham Young University (BYU) to develop models to analyze volleyball in a similar way. Vinci and Hayden went on to found VolleyMetrics, aiming to dig deeper into performance analysis for volleyball coaches.

VolleyMetrics relies on Axis network cameras to capture video at volleyball games and practices, which they transmit over the internet to their servers. The service chose to standardize on Axis because the cameras' open platform API allowed for close integration with their software. The Axis portfolio also offers a rich variety of models and features to help create the best solution for each team.

Determining points of service

In the case of Marquette University, VolleyMetrics implemented five cameras in their gym to capture various angles for coaches. While many programs choose to have a single camera behind the playing action, giving coaches a tactical view behind players; others invest further into systems of six cameras or more.

Marquette started with two AXIS P1354 Network Cameras, one behind each end of the court. Next came an AXIS P3364-V Network Camera overhead, showing an aerial view of the players. The vandal-resistant dome fit perfectly considering balls could often make contact with the camera. Lastly, VolleyMetrics integrated an AXIS P5414-E PTZ Dome Network Camera on both sides of the court, in line with the net, giving coaches PTZ capabilities to focus on specific areas during practices.

“With PTZs, teams want to be able to point at a spot where they're trying to coach,” noted Vinci. “A coach can move the camera around and zoom in on a player serving, for example, if they're discussing technique.”

Providing a service winner

Working with collegiate programs from more than 20 Division I conferences, VolleyMetrics developed custom software that not only optimized video exchange but also tags and analyzes matches for additional data. Matches are recorded using edge storage and then sent as complete files to the VolleyMetrics server only once the event is complete. This way, each school's IT department does not have to worry about streaming a high volume of frames over the network for three hours.

“It becomes a savings on cost for everybody, and it's faster. That means a savings on logistics,” noted Austin Hayden, Founder and CTO of VolleyMetrics. Coaches simply purchase different access packages to view various video and data sets all compiled under one umbrella. Instead of teams manually forwarding footage to one another, VolleyMetrics saves them the trouble and takes over recording, compressing, merging and uploading videos.

Digging into the deep sets

The backend work performed by VolleyMetrics goes far beyond basic video sharing. Tagging and analyzing video is the second step following a recorded match. Staff utilizes software to tag both basic and advanced pieces throughout the footage. All players and plays are identified, followed by tracking each touch of the ball including serves.

This information provides coaches with visual data about where on the court their players are moving and further tactical views about each touch. Statistical models are employed to determine the impact and value of individual players and lineups.

“Just to give an idea on the amount of data we gather,” Vinci explained, “there are maybe two or three Olympic teams that can gather the level of detail we do.”

