

Checking the instant replay.

Ontario Hockey League relies on Axis broadcast-quality network cameras to help officials rule on goals and penalties.



Organization:
Ontario Hockey League

Location:
Ontario, Canada

Industry segment:
Stadiums/Venues

Application:
Instant replay review,
broadcasting

Axis partner:
Northern Alarm Protection

Mission

Hockey is a game of fast action. A slap shot can hurl a puck down the ice over 145 kilometers an hour. The attack zone is often a blur of sticks and skates as players scuffle for control. Confirming goals and penalties in this melee with video cameras that maxed out at 30 frames per second was proving nearly impossible. Ontario Hockey League (OHL) needed faster, higher-resolution recording technology to do the job right.

Solution

The league turned to Northern Alarm Protection (NAP), a systems integrator and Axis partner, for help. NAP installed a combination of two AXIS V59 PTZ Network Cameras directed on the nets and one AXIS Q16 camera directed on the game clock at each of the league's 20 ice rinks.

The cameras are controlled by AXIS Camera Station video management software that incorporates a customized software interface to dual-stream the live video remotely to game officiators at league headquarters and to the local network TV station broadcasting the game. AXIS Camera Station also accepts the network TV camera feeds into the instant replay system, allowing officials to review every penalty and goal from multiple camera angles before rendering a final decision on a referee's call.

Result

With the ability to zoom in frame-by-frame on the video, officials are more confident in their reviews of referees' calls and are able to render their decisions in a matter of seconds which keeps the game moving. The HDTV-quality of the Axis cameras also gives the league's corporate partners greater visibility of their advertising space behind the goalie nets.



Raising the next generation of hockey pros

The Ontario Hockey League (OHL) evolved from Junior Hockey which started in the 1890s. In 1933-34, a Junior A division was created. Since that time, the league has grown to 20 teams and plays 680 games a season. The highly competitive league draws its 16 to 21-year-old players from across Ontario and several bordering states in the USA. Classified as a major junior hockey league, OHL provides a prime drafting pool for the National Hockey League.

OHL makes every effort to officiate its games with the same professionalism as its professional hockey league counterparts. Each referee's call – whether a goal or a penalty – is instantly reviewed and confirmed before play resumes. But the limitation of using analog video cameras that could only stream at 30 frames per second (fps) in standard definition resolution made it difficult to confirm close calls.

"We had our old analog system for over 10 years," said Conrad Hache, Director of Officiating, Ontario Hockey League. "When we zoomed in to view the puck it got very pixilated. We really needed high-definition video and the ability to go frame by frame to see if the puck crossed the line or the clock ran out."

Northern Alarm Protection proposed a new generation of broadcast-quality network video cameras from Axis Communications. The new video replay system includes two HDTV-quality AXIS V59 PTZ Network Cameras with 30x optical zoom focusing on each net, plus an HDTV-quality AXIS Q16 camera monitoring the game clock. Both cameras are able to stream at up to 60 fps. AXIS Camera Station video management software manages the cameras so that video judges in the arena and officials outside the venue can review the video remotely.

Then OHL threw NAP another challenge. "The league wanted to be able to push the camera feeds out to the local TV broadcaster's truck so they could use the additional camera angles as they televised the games," said David Koziel, President and CEO of Northern Alarm Protection. "OHL also wanted to take the broadcaster's video feeds and put them into their Axis video replay system."

With additional software and hardware from Antrica to convert signals between systems, the augmented dual-streaming solution now incorporates a dual-screen format that allows OHL officials to see more camera angles on each call. It also gives the local network TV station the ability to show the public exciting above-the-net views of plays under review.

OHL first tested the new instant video replay system at the league's national championship, the 2017 Memorial Cup, held in Windsor, ON. "The nationally broadcast event went off without a hitch," said Conrad Hache. "As a result of that success, all 20 teams have now adopted the new Axis video replay technology for their rinks."

Capturing stats for the draft

Statistics are an up-and-coming player's resume for getting drafted into the major leagues. Having the Axis cameras recording the action is proving a great way for OHL officials to verify player stats.

"While there's no financial gain in the number of goals a player scores or how many assists he has throughout the season, these kids want to make sure they're credited with all the points they deserve," said Hache.

Part of the motivation is that many players look to eventually parlay those stats into a career on a professional hockey team. In fact, one of the highest percentages of players drafted into the National Hockey League comes from the Ontario Hockey League.



AXIS V5915-V Network Camera installed over the nets and AXIS Q1615 monitoring the game clock.



Improving referee calls

The ability to review the action frame by frame is helping OHL teams minimize decision disputes. Hache cited several close calls where he was able to see exactly when the puck and player crossed the blue line. He remembered one instance when he was able to justify the call by zooming in on a single frame which confirmed that the puck crossed the goal line underneath the goalie's legs.

A by-product of capturing all the plays on video is that they provide an excellent teaching tool for referees and players. OHL keeps a log of all the penalties assessed during the course of a game which gives Hache a wealth of video at his fingertips.

"I can show a clip of a certain call and explain to players why the call was correct," said Hache. "Conversely, I can show a referee why a certain call was incorrect and instruct him on what he should have done instead."

Scoring a hat trick of benefits

In addition to the crystal clarity of the video for play reviews and airing corporate partners' advertising space during game broadcasts, a major selling point for team owners is the flexibility and expandability of the Axis solution. "Many of the systems we initially looked at were limited," said Hache. "With Axis we can add more cameras as we need them without having to purchase a whole new solution."

Hache noted that, "Team owners like the idea that we can add in broadcast station cameras on the blue line if we want to. And if a rink has a different camera we can connect it to our Axis system and use it to our advantage."

"Having high-definition Axis cameras on the nets with the ability to record at 60 frames per second helps us instantly confirm or correct the referee's call on the ice. Integrating the TV broadcast feeds into AXIS Camera Station video management software has been an extra bonus, allowing us to review every goal and penalty from multiple angles."

Conrad Hache, Director of Officiating, Ontario Hockey League.



Officials verified the puck crossed the goal line with 0.9 seconds to end the second period from the dual-streaming camera feeds of an AXIS Q1615 Network Camera on the scoreboard and an AXIS V5915 PTZ Network Camera over the net.



About Axis Communications

Axis enables a smarter and safer world by creating network solutions that provide insights for improving security and new ways of doing business. As the industry leader in network video, Axis offers products and services for video surveillance and analytics, access control, and audio systems. Axis has more than 3,000 dedicated employees in over 50 countries and collaborates with partners worldwide to deliver customer solutions. Axis was founded in 1984 and has its headquarters in Lund, Sweden.

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